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TEACHER'S MANUAL FOR PHRASE STRUCTURE RULES 13-18--LANGUAGE CURRICULUM I.

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A GUIDE WAS PREPARED FOR TEACHING PHRASE STRUCTURE RULES IN A SEVENTH-GRADE LANGUAGE CURRICULUM. THE GUIDE INCORPORATED DISCOVERY TECHNIQUES TO TEACH PHRASE STRUCTURE RULES AND SYMBOLOGY IN ADDITION TO 12 PHRASE STRUCTURE RULES DISCUSSED EARLIER (ED 010 146). AN ACCOMPANYING GUIDE WAS PREPARED FOR STUDENT USE (ED 010 147). A REVIEW ON THE 18 PHRASE STRUCTURE RULES WAS ALSO PREPARED (ED 010 152). (WN)

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OREGON CURRICULUM STUDY CENTER

TEACHER'S MANUAL
for
PHRASE STRUCTURE RULES 13-18

Language Curriculum I

The project reported herein was supported through the Cooperative Research Program of the Office of Education, U. S. Department of Health, Education and Welfare.

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OREGON CURRICULUM STUDY CENTER

TEACHER'S MANUAL

(PHRASE STRUCTURE RULES 13-18)

Language Curriculum I

THE NOUN PHRASE

Your students may wonder why they did not examine the subject NP before the VP because of the subject's initial position in a kernel sentence. Our "discovery" method of analysis prompts us to divide each kernel sentence into two parts, NP and VP. If a student developed the NP rules first, he could become confused by the frequent appearance of other Noun Phrases in the sentence (actually within the part he would be calling the VP.) Furthermore if we reverse the order of the rules, we would be forced to reconsider NP rules again as we develop the VP. Our order of rules, we believe, reduces confusion and eliminates needless duplication.

RULE (13): NP $\longrightarrow$ T + N + N^{O}

Further examination would reveal that the determiner (T) could be subdivided into various smaller groups, so that we could distinguish between the uses of the definite determiner (the), the indefinite (a, an, and some), and the special use of the as a generic determiner, where it would refer to the use of the in sentences like "The horse is a powerful animal.", and the use of a zero determiner as in sentences like "Horses are four-legged mammals." and "Love of money is the root of all evil." A chart might show this differentiation:

	definite	indefinite	generic
sing	the	a/an	the
plur	the	some	∅
N_{m}	the	some	∅

Yet this division would still not account for the zero determiner with proper nouns. Further consideration of this problem will be dealt with in expansion of the noun phrase rules, especially in later years.

Exercise 1: Page 1

1. The boy/slept.
2. The house/burned down.
3. The cat/climbed the tree.
4. A monkey/threw the banana.
5. A jeep/ goes everywhere.
6. An apple/rolled away.
7. Some books/were left here.
8. The idea/pleases me.
9. These people/have built a swimming pool.
10. The smoke/rose slowly.
11. That school/ is my alma mater.

T	N
the	boy
the	house
the	cat

a	monkey
a	jeep
an	apple
some	books
the	idea
these	people
the	smoke
that	school

As your students consider determiners in this unit, they might wish to add them to their lexicons. You may need to point out that the essential noun phrase (subject) of a kernel sentence includes only the determiner plus noun (T + N). Words added to expand the subject are not allowed as optional elements in a kernel sentence; in other words, when the simple noun phrase (subject) is expanded the sentence becomes a transformation.

Exercise 2: Page 2

Answers will vary but responses might be similar to these:

1. The boy ran quickly.
2. The man gave them some money.
3. A teacher lost the book.
4. This man is our father.
5. The lady borrowed two eggs.
6. Some children knocked on the door.
7. That noise makes me angry.
8. These sentences are hard to understand.
9. The teachers are our friends.
10. The crate contains oranges.
11. An apple fell from the tree.
12. Those fences were burned down.
13. That story surprised me.
14. This machine spreads the blacktop.
#15. Some dirt lies on the floor.

Some students might possibly give a singular noun for the subject in Sentence 6. Either a singular noun (boy) or a plural noun (children) would be all right. Because of the singular verb "lies" in Sentence 15 the subject must be either singular (if it is a countable noun) or a non-countable noun. Some students might want to write the following: "Some girl lies on the floor." Others may choose to write, "Some sugar lies on the floor."

Exercise 3: Page 2

Again answers should vary, but each blank must have an appropriate determiner. Possible answers would be

1. A fish grabbed the worm.
   or
   The fish grabbed the worm.

2. The woman washed the dishes.
or
A woman washed the dishes.

3. The bell rang in the distance.
or
A bell rang in the distance.

4. Some people came to see the car.
or
The people came to see the car.

5. The airplane circled above the fog.
or
An airplane circled above the fog.

3. A deer hit the car.
or
The deer hit the car.
or
Some deer hit the car.

#(As "deer" is both singular and plural a, the, and some should be acceptable.)

7. Some children stepped in the wet cement.
or
The children stepped in the wet cement.

8. This book belongs to me.
or
That book belongs to me.
or
The book belongs to me.

9. The pictures came from the art gallery.
or
These pictures came from the art gallery.
or
Some pictures came from the art gallery.
or
Those pictures came from the art gallery.

10. Some parts are difficult.
or
Those parts are difficult.
or
These parts are difficult.
or
The parts are difficult.

Page 2 (Other Noun Phrases found in the sentences.)

Students should have no trouble spotting several Noun Phrases in addition to the essential subject NP. (Although the NP in Sentences 3, 5, 7, and 9 is part of an adverbial of location, your students would not need to know this in order to recognize the NP.)

1. the worm
2. the dishes
3. the distance (in the distance is locative. See Rule (11).)
4. the car (This NP is actually the object of the infinitive.)
5. the fog (above the fog is locative.)
6. the car
7. the cement (in the cement is locative. You might remind students that the presence of "wet" keeps this from being a kernel sentence.)
8. me (Because this NP is actually a pronoun it may be difficult for most students to see and you will probably not want to force it at this point. Students are introduced to pronouns later on page 8.)
9. the gallery (Again, the word "art" has expanded the NP.) In the art gallery is locative.)
10. (Difficult is a predicate adjective. See Rule (11).)

Exercise 4: Pages 2-3

A. 1. T N T N T N
The men gave the girl a present.

2. T N T N
Some people called on the Smiths.

3. T N T N
The shirt was on the line.

4. T N T N
This candidate will answer the question.

5. T N T N
A cloud hid the sun.

6. T N T N
Those skis belong to the club.

7. T N T N
The boy is wearing a coat.

8. T N
An orange would taste good.

9. T N T N T N
The nurse will take these children to the hospital.

10. T N T N
The child is a genius.

B. 1. T N T N T N
This report will shed some light on the problem.

2. T N T N T N
Those quarters are a part of that collection.

3. T N T N T N
Some men climb this mountain without a rest.

4. T N T N
These binoculars make that ship seem close.

5. T N T N
This tunnel makes an escape possible.

6. T N T N T N
A part of that land will need some water.

7. T N T N N
An elephant can do that work without help.

#In this sentence students encounter the noun help which seems to have no determiner. Perceptive students should see that because they can inject a determiner (such as some) help is really a noun. This may lead to speculation about the "missing" determiner.

Exercise 5: Page 3
Several of the sentences in this exercise show students that the NP is not always a simple construction. Sentences 3, 5, 7, 9, 10, 11, 13, 14, and 15 have one or more Noun Phrases which lack determiners. Sentence 2 has the adjective large embedded within the NP. Sentence 3 also contains the adjective large but, in addition, it has no determiner. Sentence 10 has an adjective (interesting)embedded within the NP. Sentences 2 and 10 offer you an opportunity to discuss the alternate forms a and an and to indicate that the form which is used is determined by whether or not the word immediately following begins with a vowel or a consonant. You can point out that although an is the form commonly used with animal, the fact that large intervenes makes a acceptable. The reverse is, of course, true in 10. Because interesting starts with a vowel it becomes necessary to use an. A comparison of sentences within this exercise (for example, Sentences 1, 2, and 3) should help students gain insight into the possiblities and perplexities of the NP.

1. The horses ran away.
2. The horse is a (large) animal.
3. Horses are(large) animals.
4. These people will be gone tomorrow. (tomorrow is an adverbial of time)

5. People are funny.
6. The boy is a drummer.
7. Jerry is a drummer.
8. The movie will be here tomorrow.
9. It will be here tomorrow.
#10. Mathematics is an (interesting) subject.
#11. Magic is (his) hobby.
12. The rice is cooking.
13. Rice grows in Indonesia.
14. Tom carried the ball.
15. He carried the ball.
16. The boy carried the ball.

(A comparison of the subject NP in Sentences 14, 15, and 16 might pave the way for students' acceptance of the "empty" determiner with Tom and He. You may need to emphasize the notion that the students' built-in grammar enables him to make this choice.)

Exercise 6: Page 4

Answers may vary within limits. Sentences 1, 4, 5, 8, 9, 10, and 14 need an appropriate determiner (usually the). Sentences 2, 3, 6, 7, 11, 12, and 13 do not require a determiner. Eventually we will want to show that the possessive pronoun our is a determiner which is the result of a transformation. You will not want to even mention this now and may want to require your students to limit themselves to the ones we have mentioned. However, some may see that it really acts like a determiner and they should not be marked wrong. Sentence 7 presents two possibilities: students might use the determiner the in speaking of a particular piece of gold (The gold) or omit the determiner when specifying an undetermined quantity (Gold).

Exercise 7: Pages 5 and 6

A. Sentences 3, 4, 5, 7, 8, 10, 12, 13, and 14 do not require determiners, Although 5, 7, 8, 12, and 14 may have them. Answers should be similar to this:

1. The Chinese are a noble people.
2. This hat is more becoming than that one.
3. ∅ China is an ancient country.
4. ∅ You won't miss me.
5. ∅ Blood was smeared on the steps.
6. A Korean enrolled in school this fall.
7. ∅ Koreans are often talented people.
8. ∅ Koreans live in a divided country.
9. The mammoth is extinct.
10. ∅ Mammoths lived in North America.
11. A truck ran off the highway.
12. ∅ Trucks are larger than station wagons.
13. ∅ Marie graduated at mid-term.
14. ∅ School is out for the summer.
15. This / That school won the tournament in debate.

B. Sentence 6 is probably the only one in the group which absolutely requires a determiner. Several of the others might take determiners but do not require them. Several of the sentences permit a choice of determiners.

1. Some / These / Those / All / ∅ / The plants require more light.
   (It is not clear what it is that plants require more light than. The word "more" indicates that a comparison is being made; however, the sentence does not actually say this. It might be a statement that some plants require more light than do others; it might be a statement that these or those plants require more light than they are getting (this is the most logical explanation); or it might be merely a statement that the (particular) plants require more light than they are getting.)
2. ∅ Courage is hard to measure.
3. The settlers replaced the Indians.
   (Students might want to write "Settlers replaced the Indians." You could point out that there is a certain parallel structure in "The settlers . . . the Indians." "Settlers replaced the Indians" is not necessarily incorrect however.)
4. The rules make the game interesting.
5. ∅ Marble was used for the mantel.
6. The marble was an agate.
7. ∅ People seldom learn from experience.
8. The people moved away. ("People" without a determiner might be acceptable. One could say "People moved away" meaning an undetermined number of people.)
   or
   Some people moved away.
   or
   ∅ People moved away
9. ∅ Clarinda fell from the horse.
10. ∅ Mathematics is my favorite subject.

The Pronoun: Page 6

This simple exercise serves to introduce pronouns as a kind of noun. The true complexity of the pronoun structure will need be to be resolved later.

1. The boys ran away from home.
2. They ran away from home.
3. An elk jumped the fence.
4. It jumped the fence.

5. The president made a speech.
6. He made a speech.
7. Margaret is the chairman.
8. She is the chairman.
9. You will never catch up.
10. I lost my permit.
11. We will go on Friday.
12. This rain will last all day.
13. This will last all day.

14. These papers have been checked.
15. These have been checked.
16. That Buick is beautiful.
17. That is beautiful.

The questions and discussion at the bottom of page 6 should help students see the two uses of this (as determiner in Sentence 12, but as the NP in Sentence 13); the two uses of these (as determiner in Sentence 14, but as NP in Sentence 15); and the two uses of that (as determiner in Sentence 16, but as N in Sentence 17). Most studentes will agree that no determiner appears with the pronoun.

Number in Nouns: Page 7

1.	boy	boys
2.	egg	eggs
3.	man	men
4.	arrow	arrows
5.	oriole	orioles
	tree	trees

Page 7

In discussing the paragraph at the bottom of page 7, you may need to remind students that in Rules (7) and (8) we noted that the number of the noun in the essential NP (the subject) usually controls the number of the noun used after the verbs Be and Vlnk. Other verbs do not impose this restriction on number.

Exercise 8: Page 8

1. The canary escaped.
   The canary $T + N + N^{o} \longrightarrow$ the + canary + one $\rightarrow$ the canary

2. A beatnik sang on the corner.
   A beatnik $T + N + N^{o} \longrightarrow$ a + beatnik + one $\longrightarrow$ a beatnik
   the corner $T + N + N^{o} \longrightarrow$ the + corner + one $\rightarrow$ the corner

3. The singers pleased the audience.
   The singers $T + N + N^{o} \longrightarrow$ the + singer + more than one $\longrightarrow$ the singers
   the audience $T + N + N^{o} \longrightarrow$ the + audience + one $\longrightarrow$ the audience

4. This boy is a boxer.
This boy T + N + N^o ⟶ this + boy + one ⟶ this boy
a boxer T + N + N^o ⟶ a + boxer + one ⟶ a boxer

5. These terriers belong to Mary.
These terriers T + N + N^o ⟶ these + terrier + more than one ⟶ these terriers

Mary T + N + N^o ⟶ ∅ + Mary + one ⟶ Mary

6. The children are at the movie.
The children T + N + N^o ⟶ the+child + more than one ⟶ the children

the movie T + N + N^o ⟶ the + movie + one ⟶ the movie

7. The giant hid in the cupboard.
The giant T + N + N^o ⟶ the + giant + one ⟶ the giant
the cupboard T + N + N^o ⟶ the + cupboard + one ⟶ the cupboard

8. The students were running in the hallway.
The students T + N + N^o ⟶ the + student + more than one ⟶ the students
the hallway T + N + N^o ⟶ the + hallway + one ⟶ the hallway

9. That plane stood on the runway.
That plane T + N + N^o ⟶ that + plane + one ⟶ that plane

the runway T + N + N^o ⟶ the + runway + one ⟶ the runway

10. The women formed a club
The women T + N + N^o ⟶ the + woman + more than one ⟶ the women

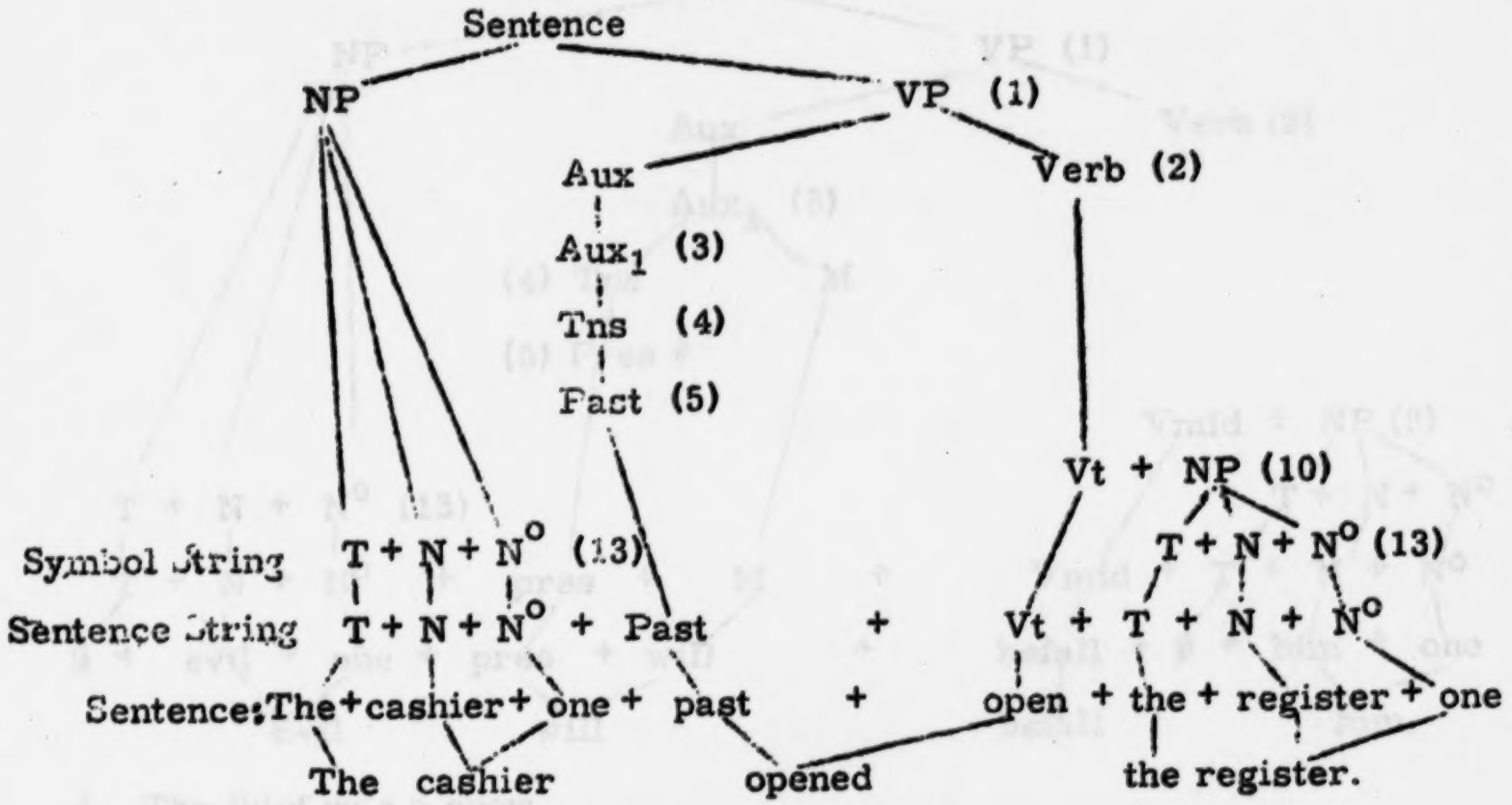
a club T + N + N^o ⟶ a + club + one ⟶ a club

NOTE: Please change the number of Exercise 7 to 9 on page 8

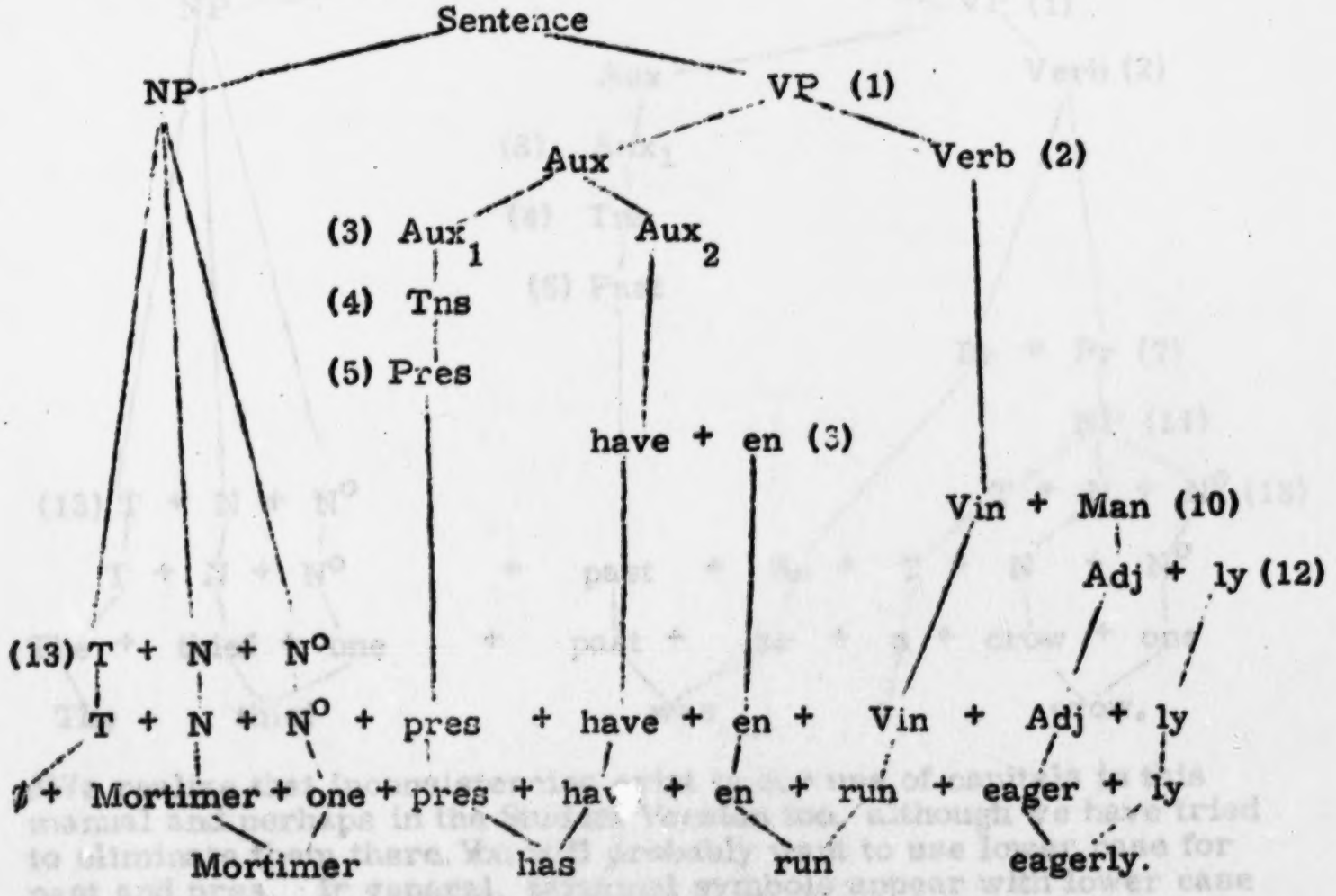
Exercise 9: Pages 8-10

A. You will notice that the diagram on page 9 bypasses the verb classes and moves directly from Verb to Vin. However, if your students have difficulty seeing this, they should take the Verb through each step.

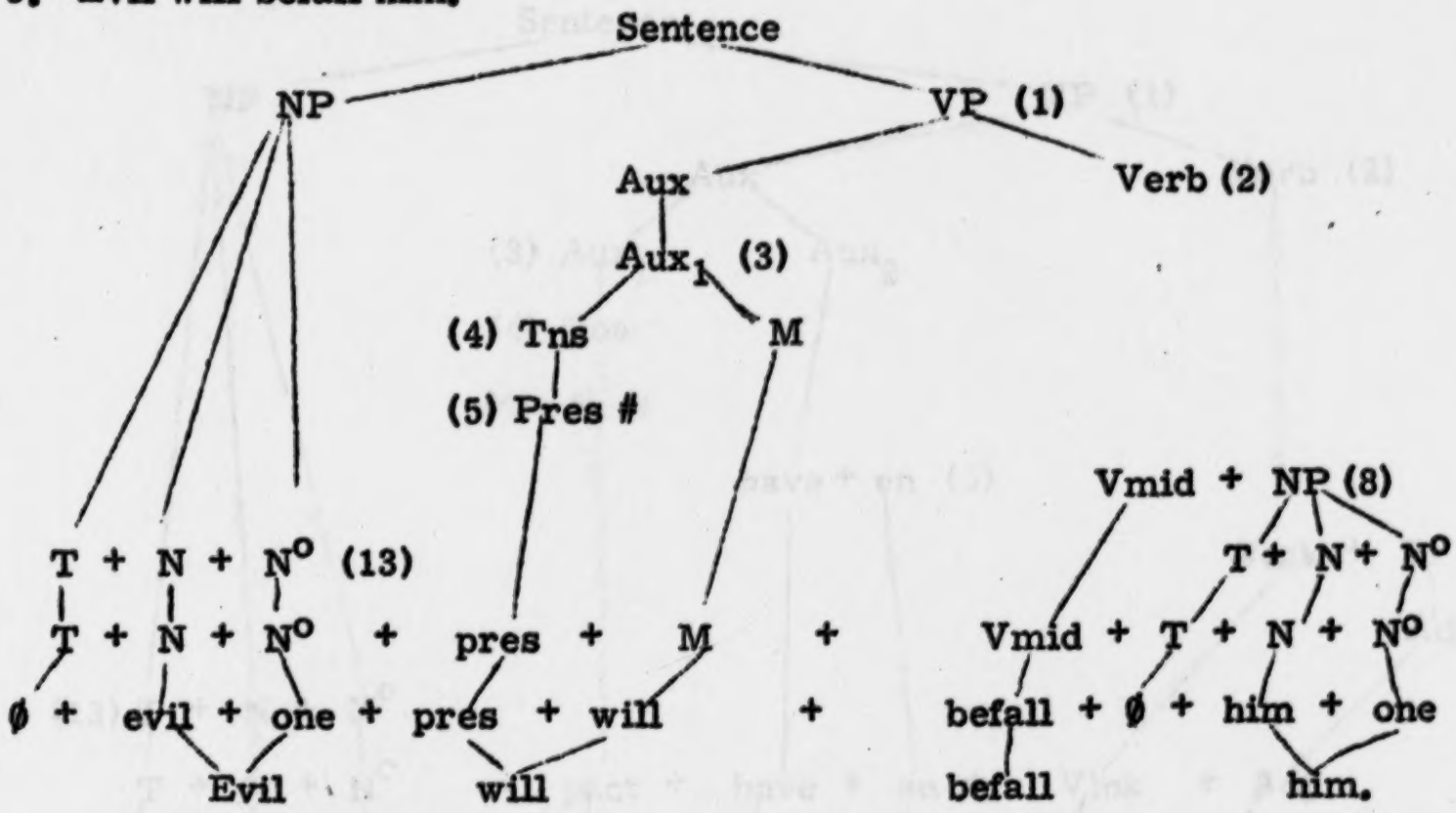
1. The cashier opened the register.


Sentence
NP
VP (1)
Aux
Verb (2)
Aux1 (3)
Tns (4)
Past (5)
Vt + NP (10)
Symbol String T + N + N° (13)
T + N + N° (13)
Sentence String T + N + N° + Past + Vt + T + N + N°
Sentence: The + cashier + one + past + open + the + register + one
The cashier
opened
the register.

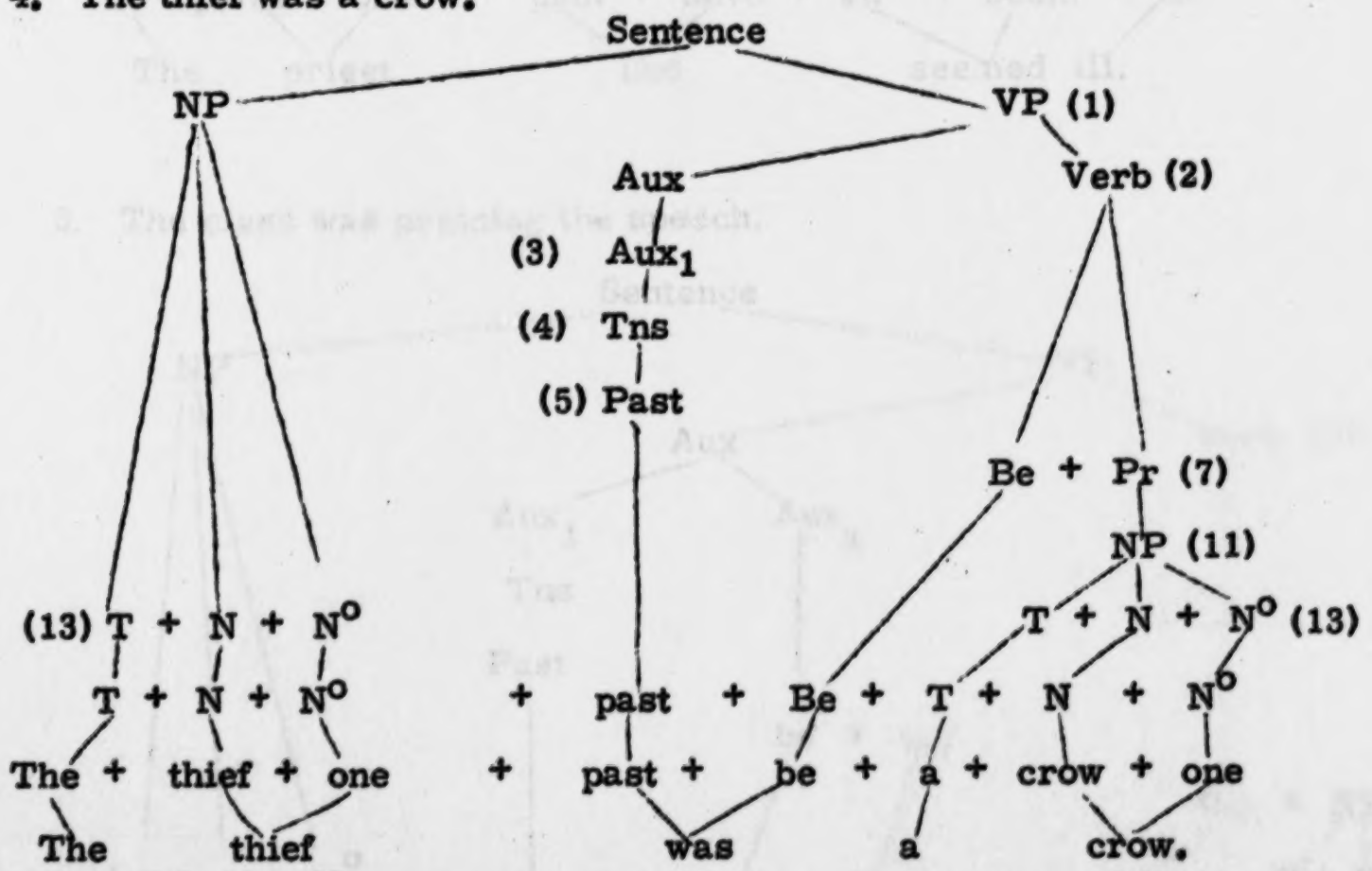
2. Mortimer has run eagerly.



3. Evil will befall him.

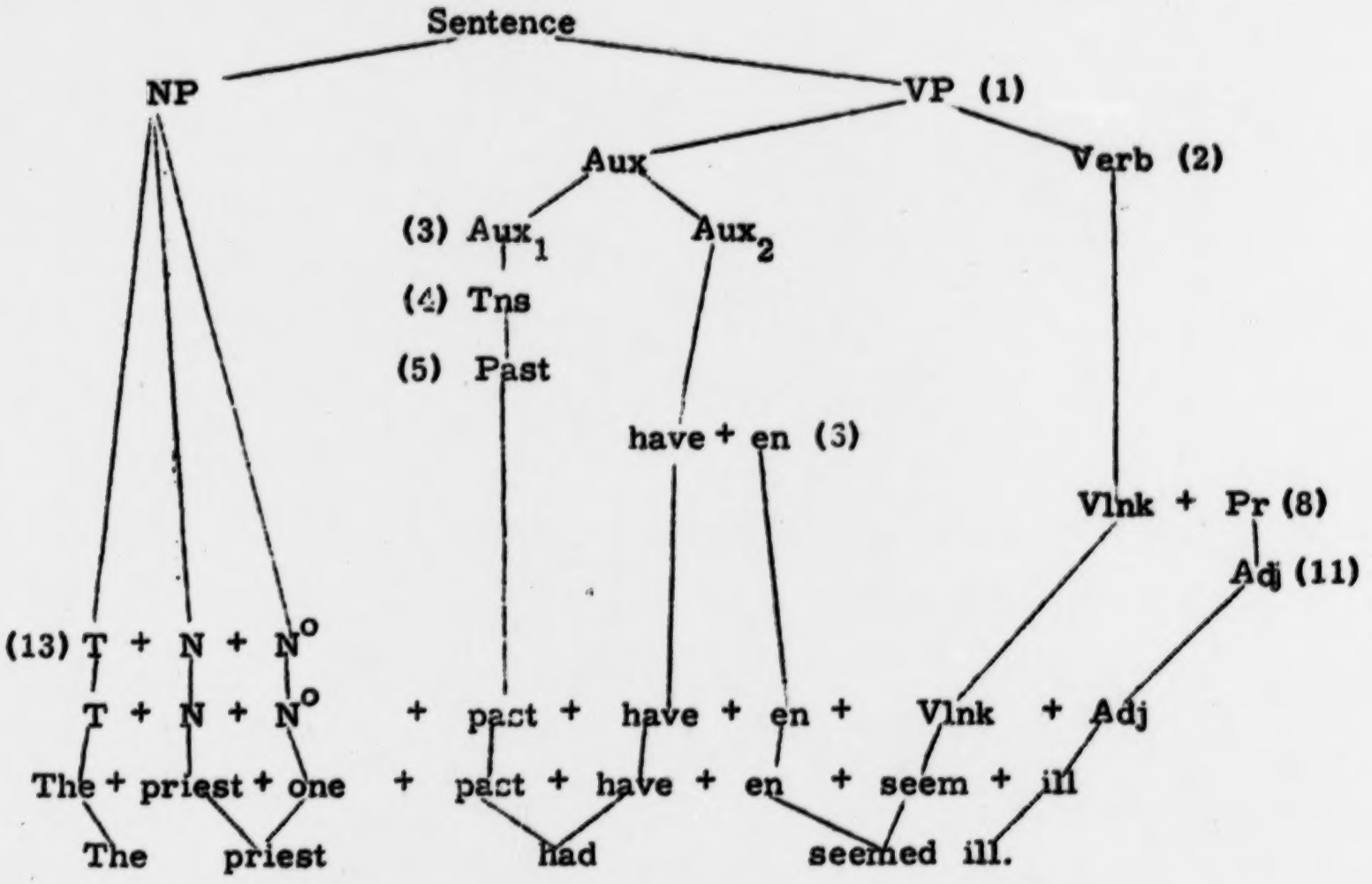


4. The thief was a crow.

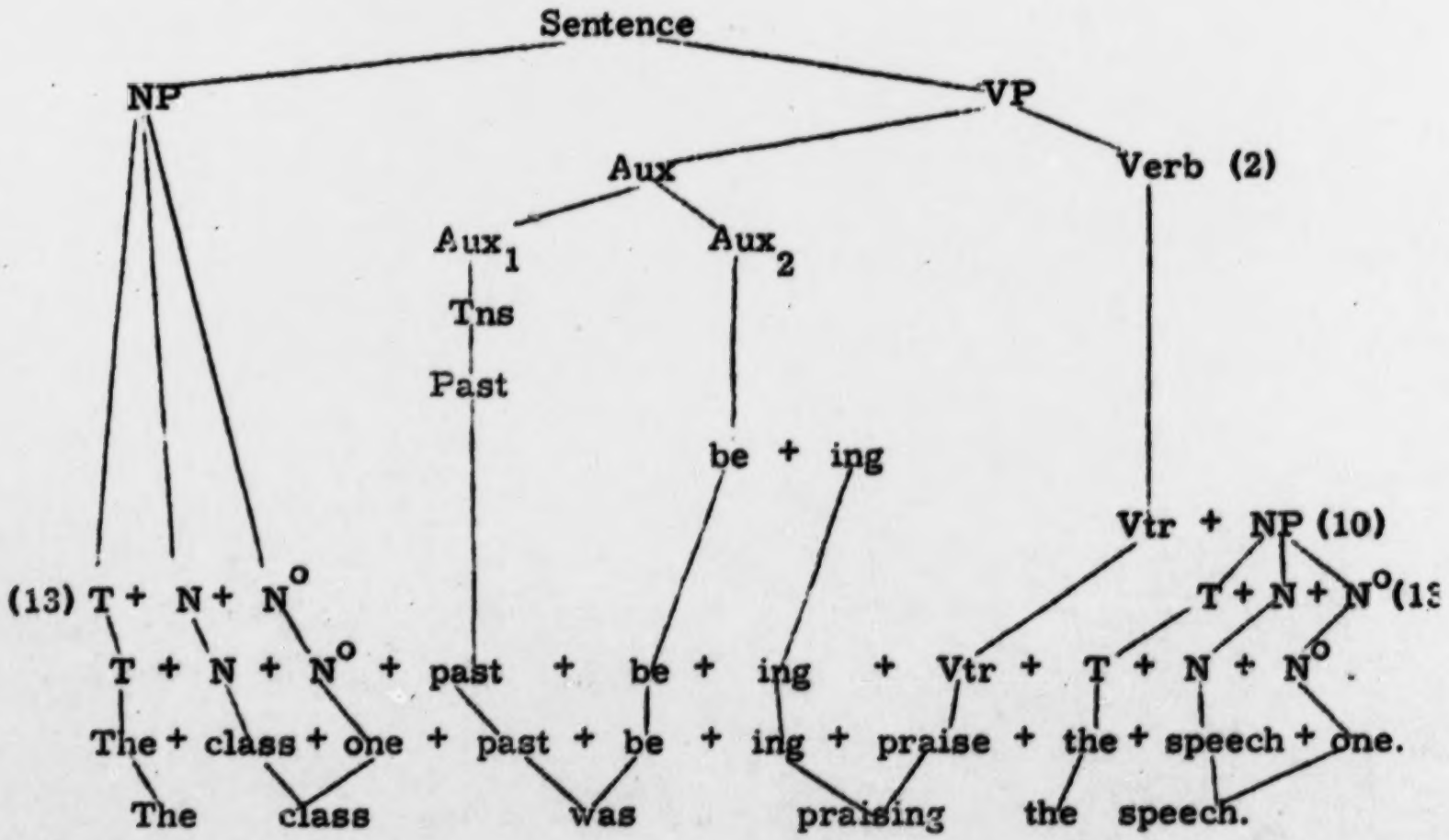


#We realize that inconsistencies exist in our use of capitals in this manual and perhaps in the Student Version too, although we have tried to eliminate them there. You will probably want to use lower case for past and pres. In general, terminal symbols appear with lower case letters.

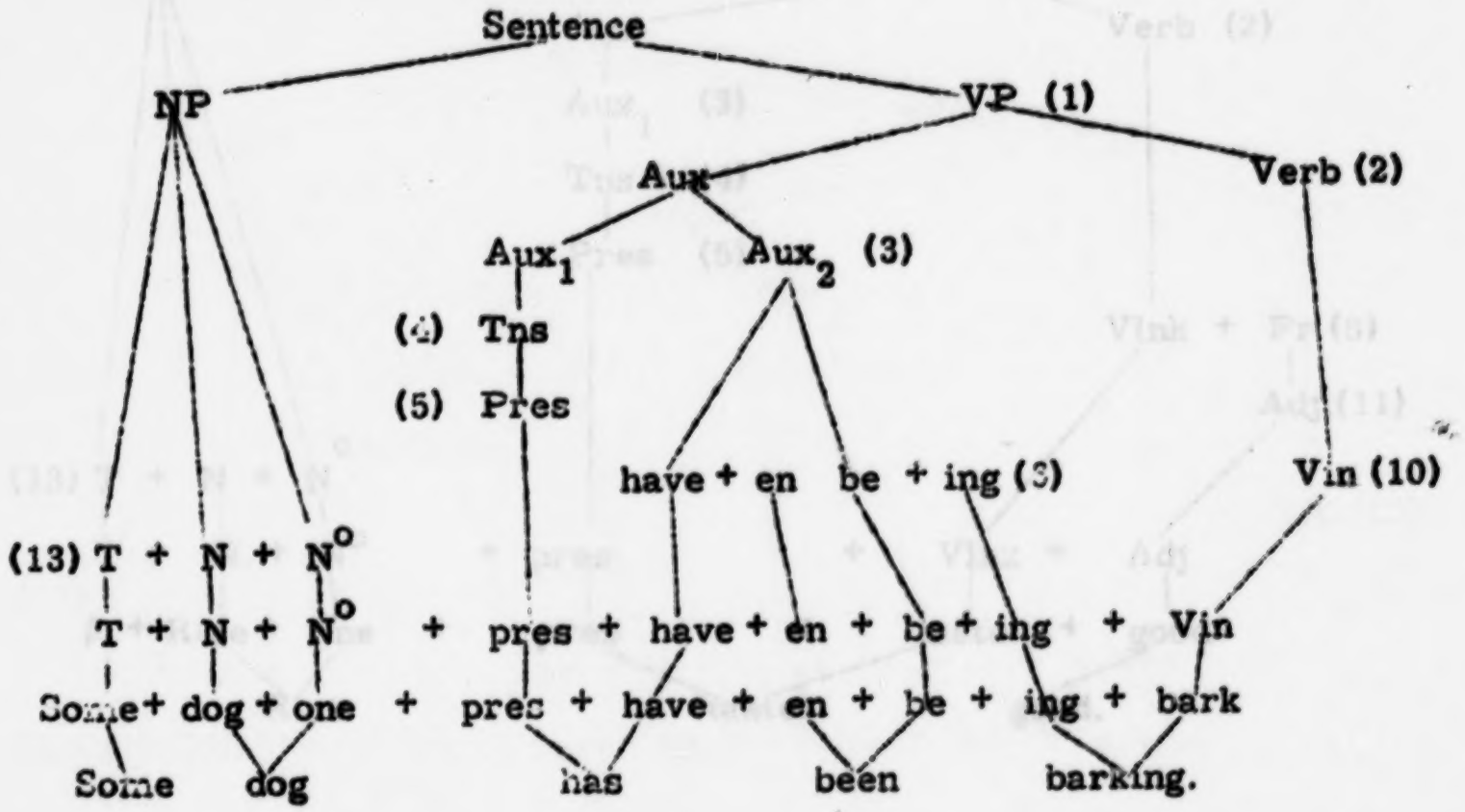
5. The priest had seemed ill.


Sentence
NP
VP (1)
Aux
Verb (2)
(3) Aux1
Aux2
(4) Tns
(5) Past
have + en (3)
Vlnk + Pr (8)
Adj (11)
(13) T + N + N°
T + N + N° + past + have + en + Vlnk + Adj
The + priest + one + past + have + en + seem + ill
The priest had seemed ill.

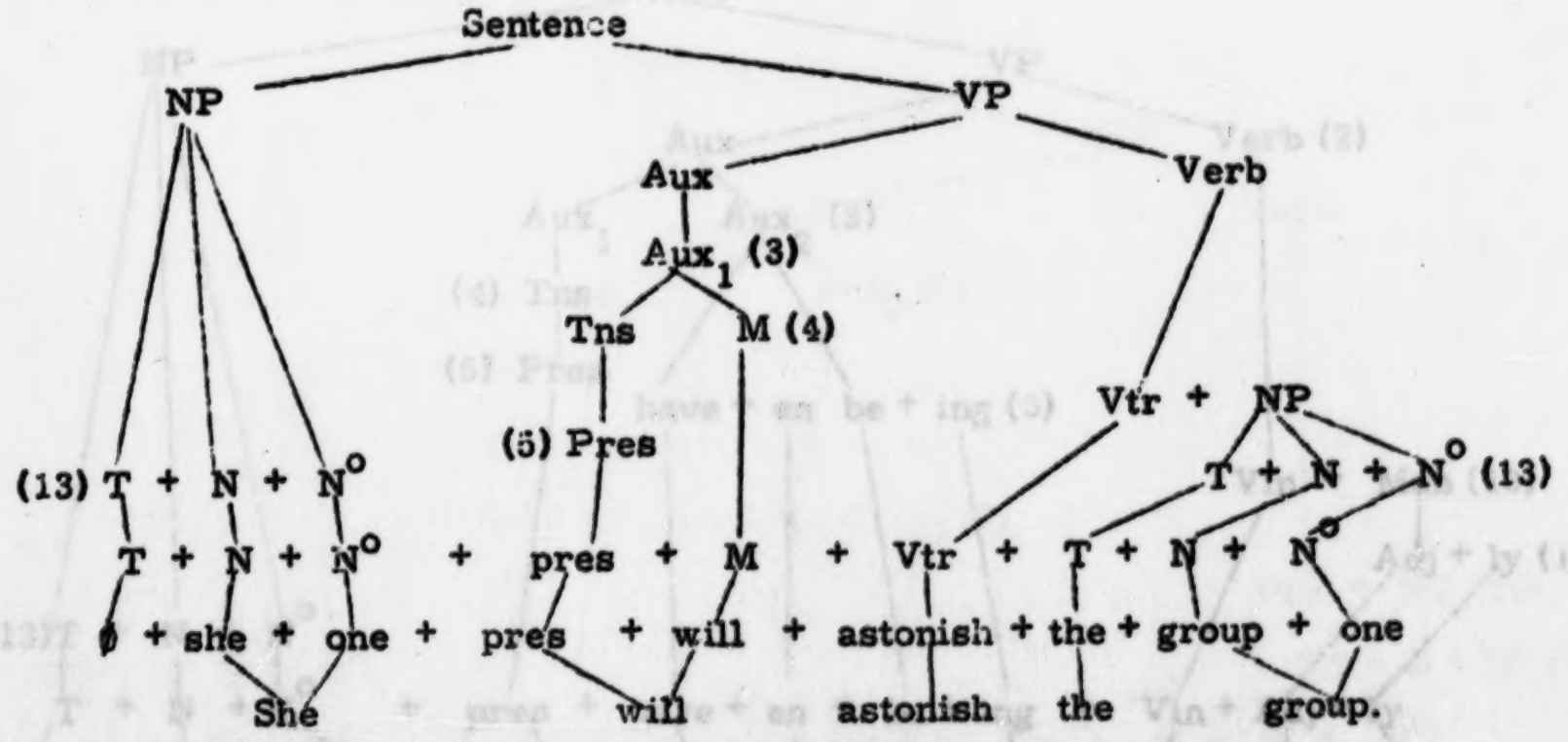
6. The class was praising the speech.


Sentence
NP
VP
Aux
Verb (2)
Aux1
Aux2
Tns
Past
be + ing
Vtr + NP (10)
(13) T + N + N°
T + N + N° + past + be + ing + Vtr + T + N + N°
The + class + one + past + be + ing + praise + the + speech + one.
The class was praising the speech.

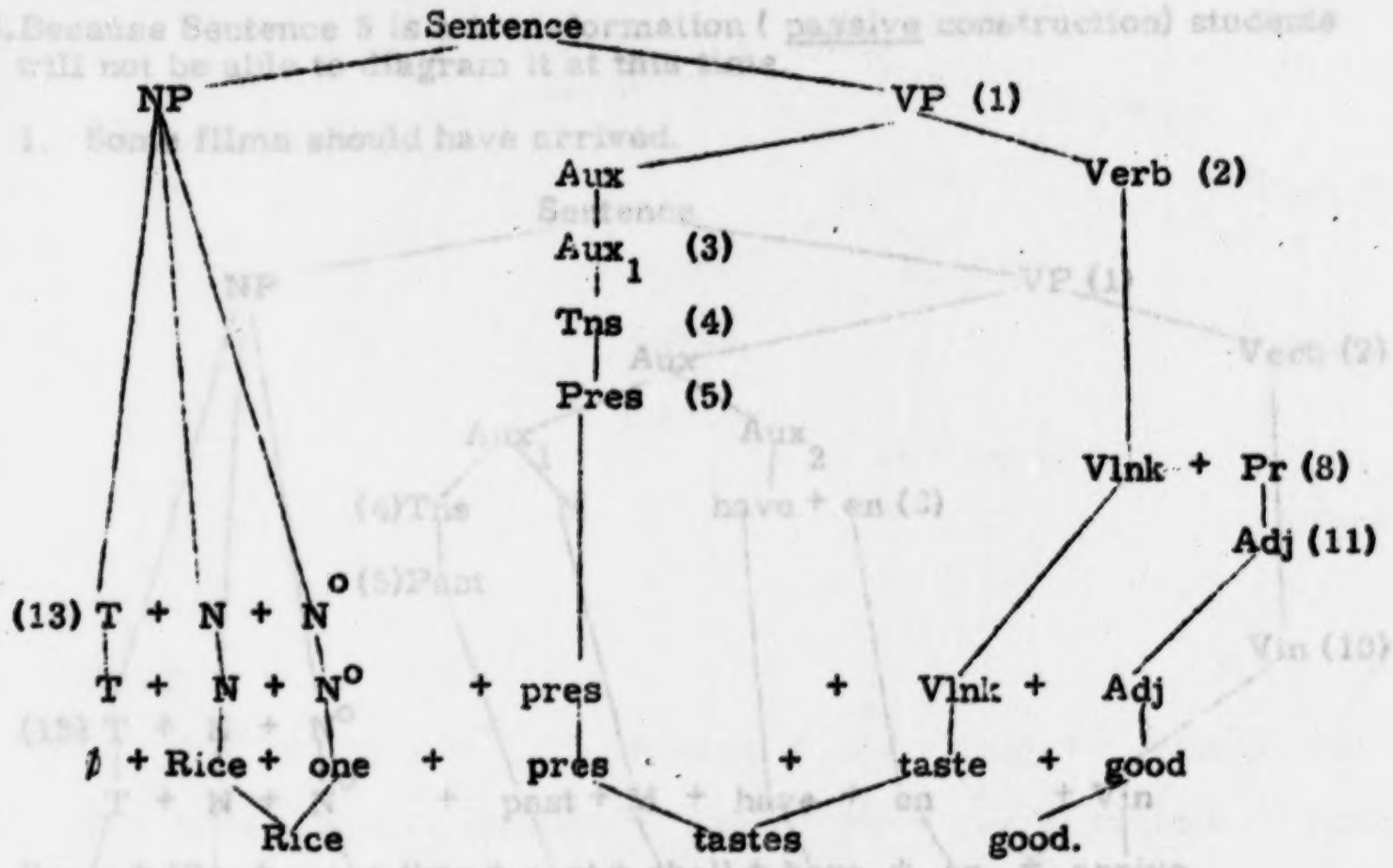
7. Some dog has been barking.



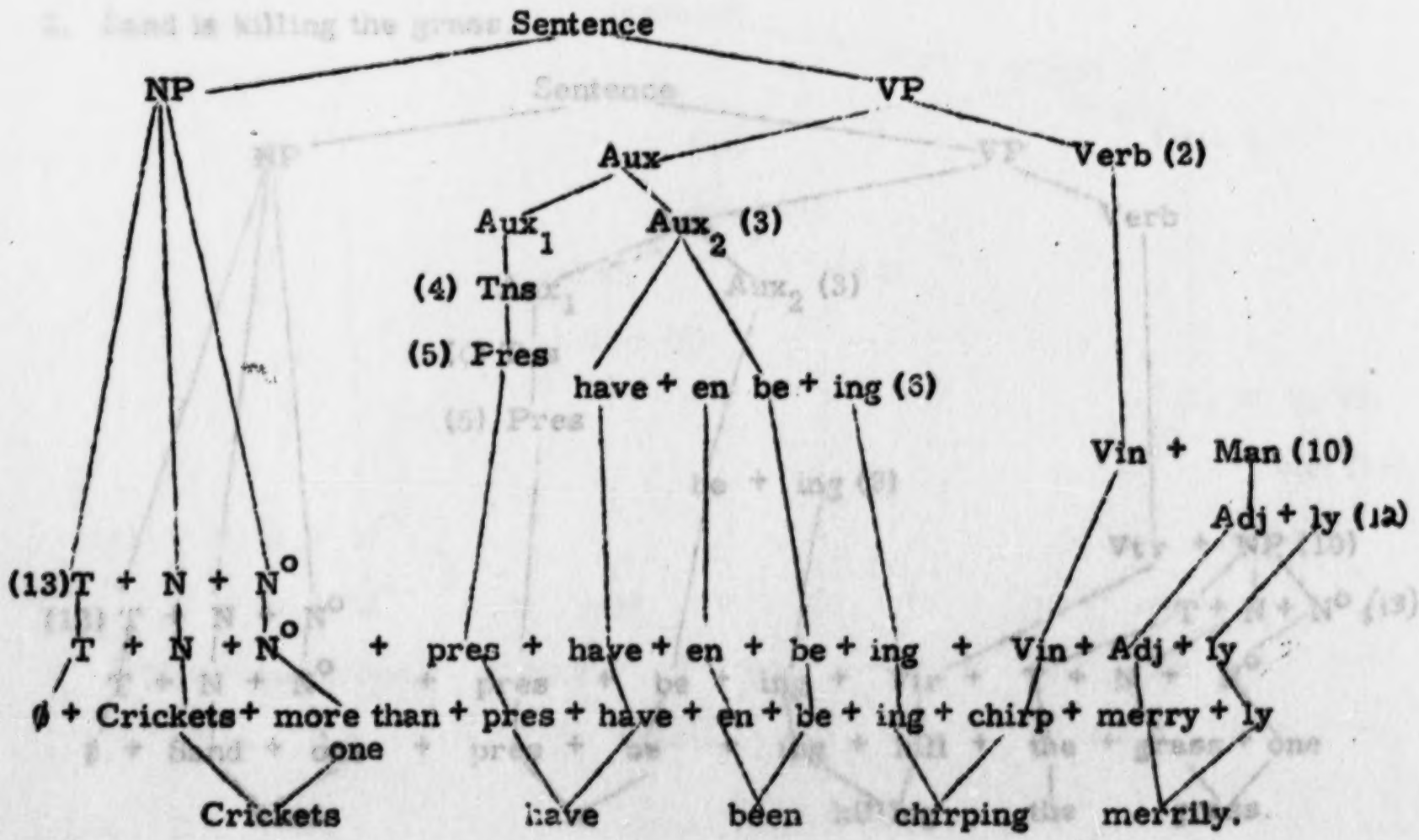
8. She will astonish the group.



9. Rice tastes good.



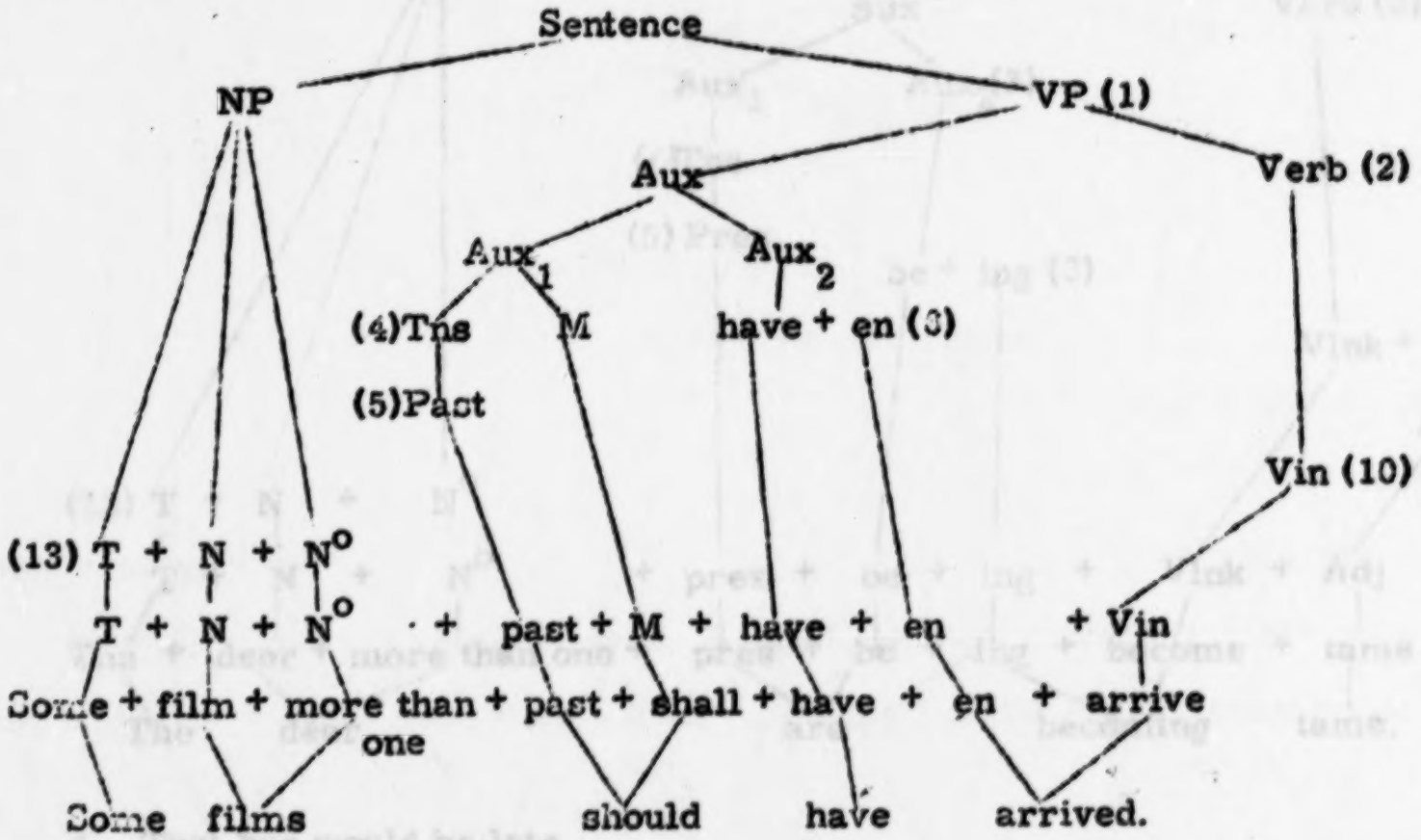
10. Crickets have been chirping merrily.


Sentence
NP
VP
Aux
Verb (2)
Aux1
Aux2 (3)
(4) Tns
(5) Pres
have + en be + ing (6)
Vin + Man (10)
Adj + ly (12)
(13) T + N + N°
T + N + N° + pres + have + en + be + ing + Vin + Adj + ly
∅ + Crickets + more than + pres + have + en + be + ing + chirp + merry + ly
one
Crickets
have
been
chirping
merrily.

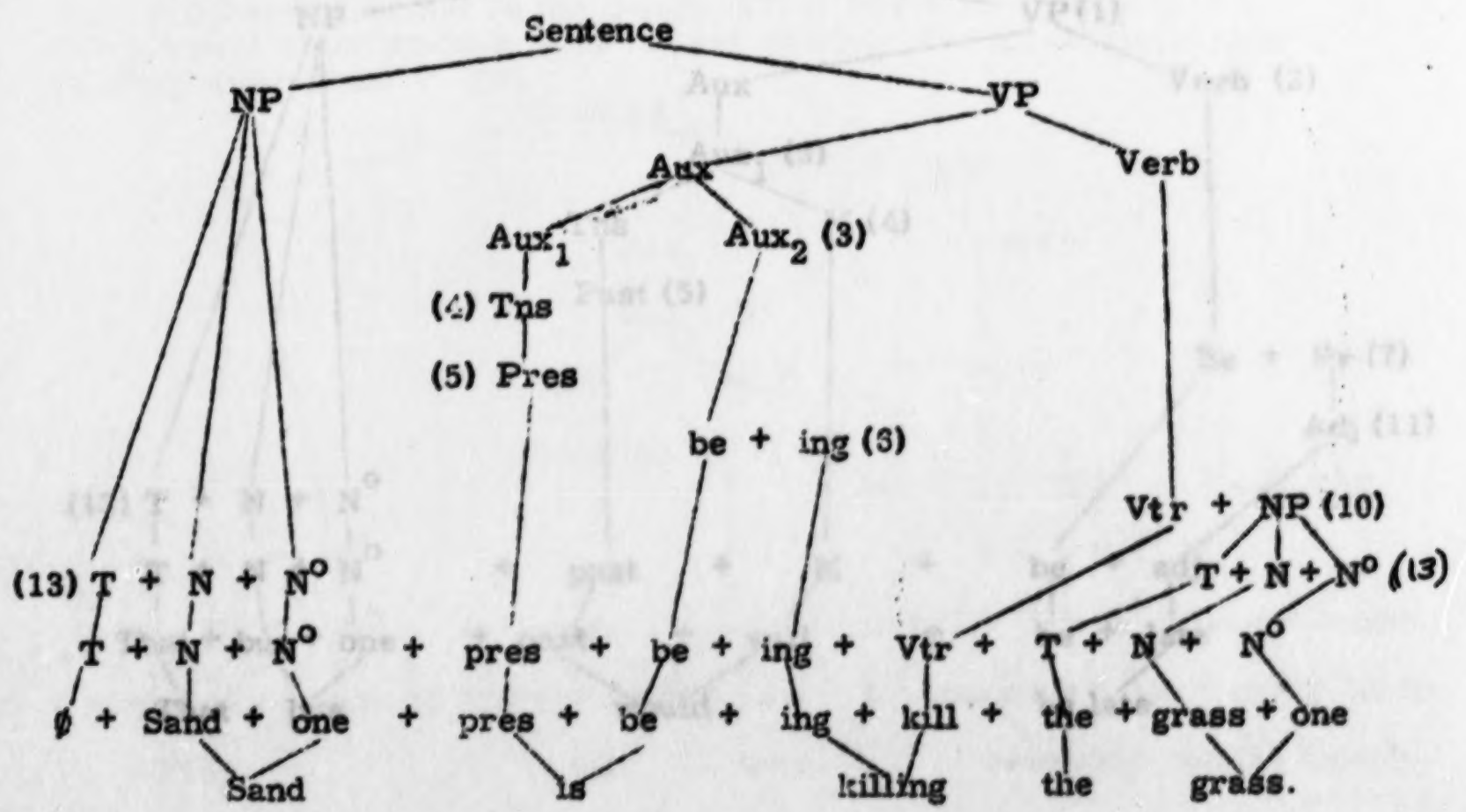
Exercise 9: Page 9

B. Because Sentence 5 is a transformation (passive construction) students will not be able to diagram it at this time.

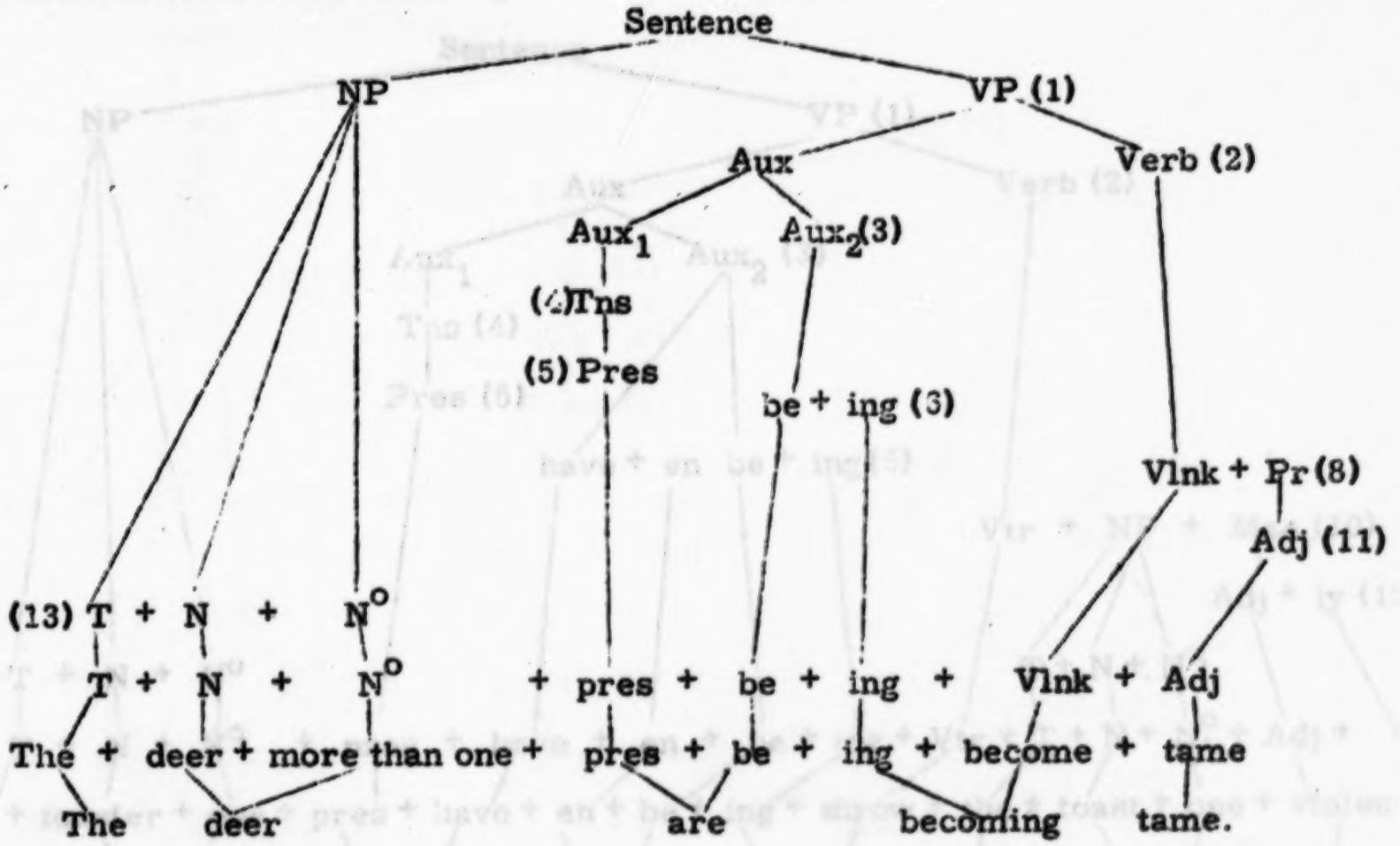
1. Some films should have arrived.



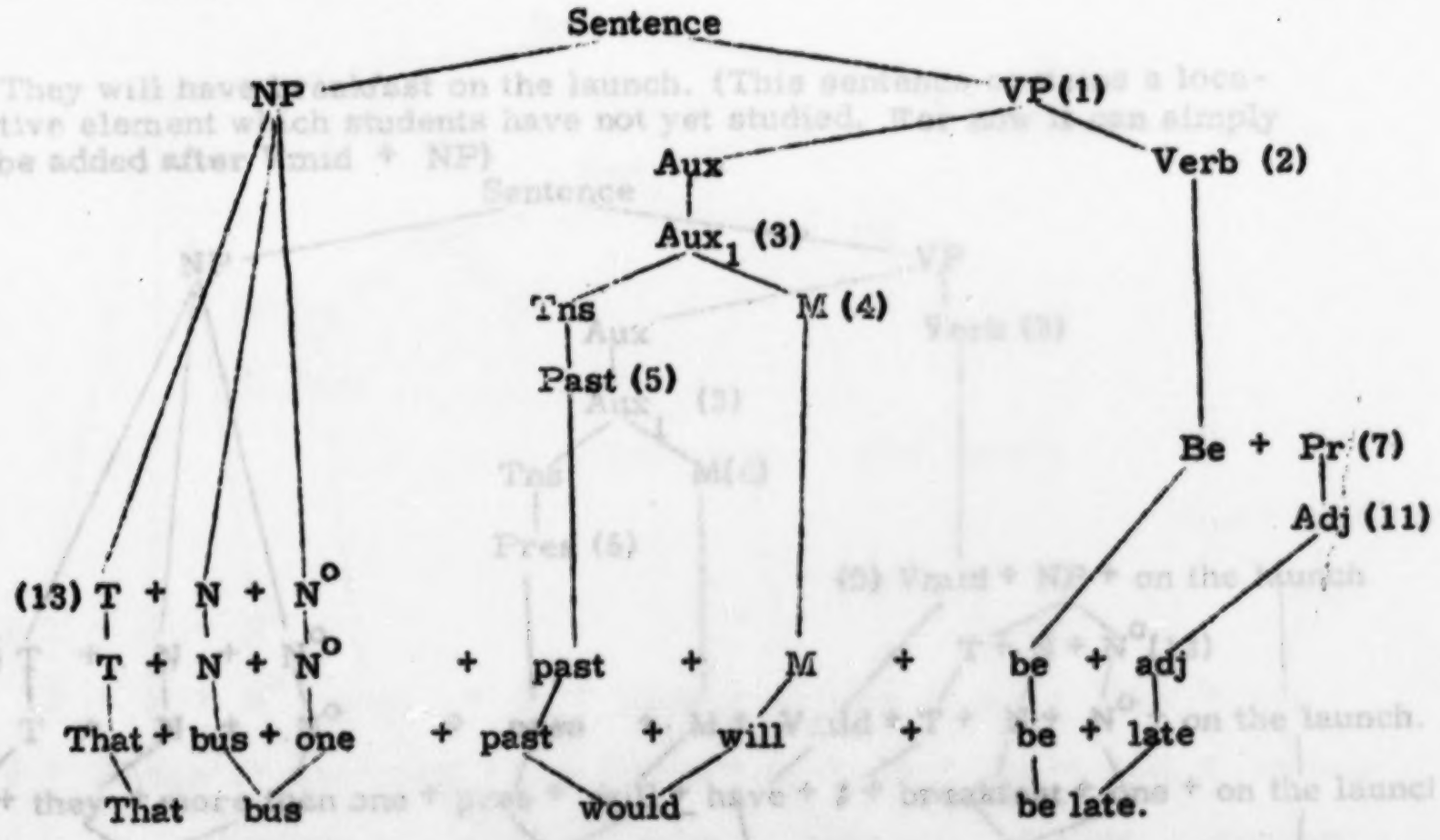
2. Sand is killing the grass.



3. The deer are becoming tame.

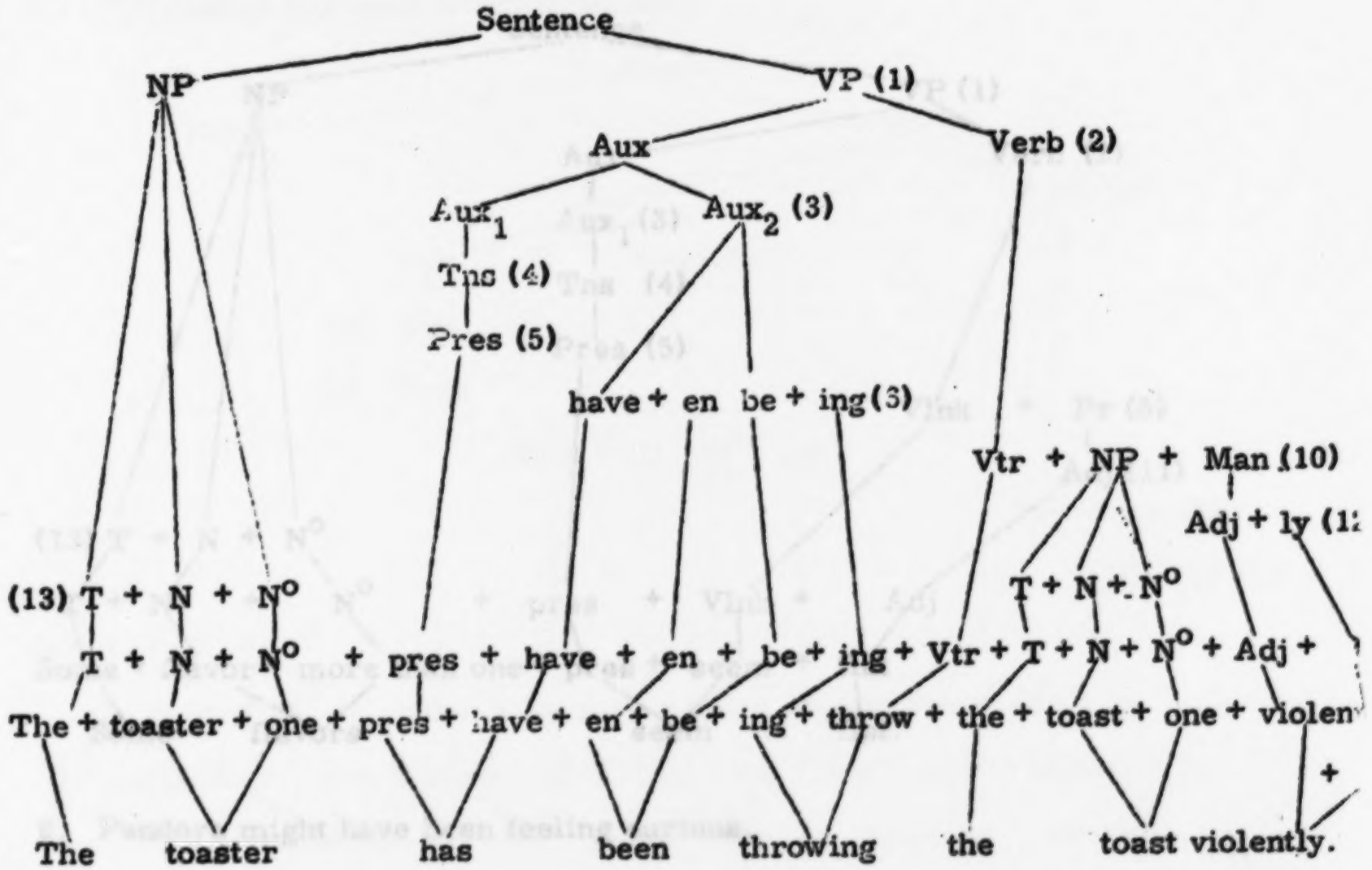

Sentence
NP
VP (1)
Aux
Verb (2)
Aux1
Aux2 (3)
(4) Tns
(5) Pres
be + ing (3)
Vlnk + Pr (8)
Adj (11)
(13) T + N + N°
T + N + N° + pres + be + ing + Vlnk + Adj
The + deer + more than one + pres + be + ing + become + tame
The deer are becoming tame.

4. That bus would be late.

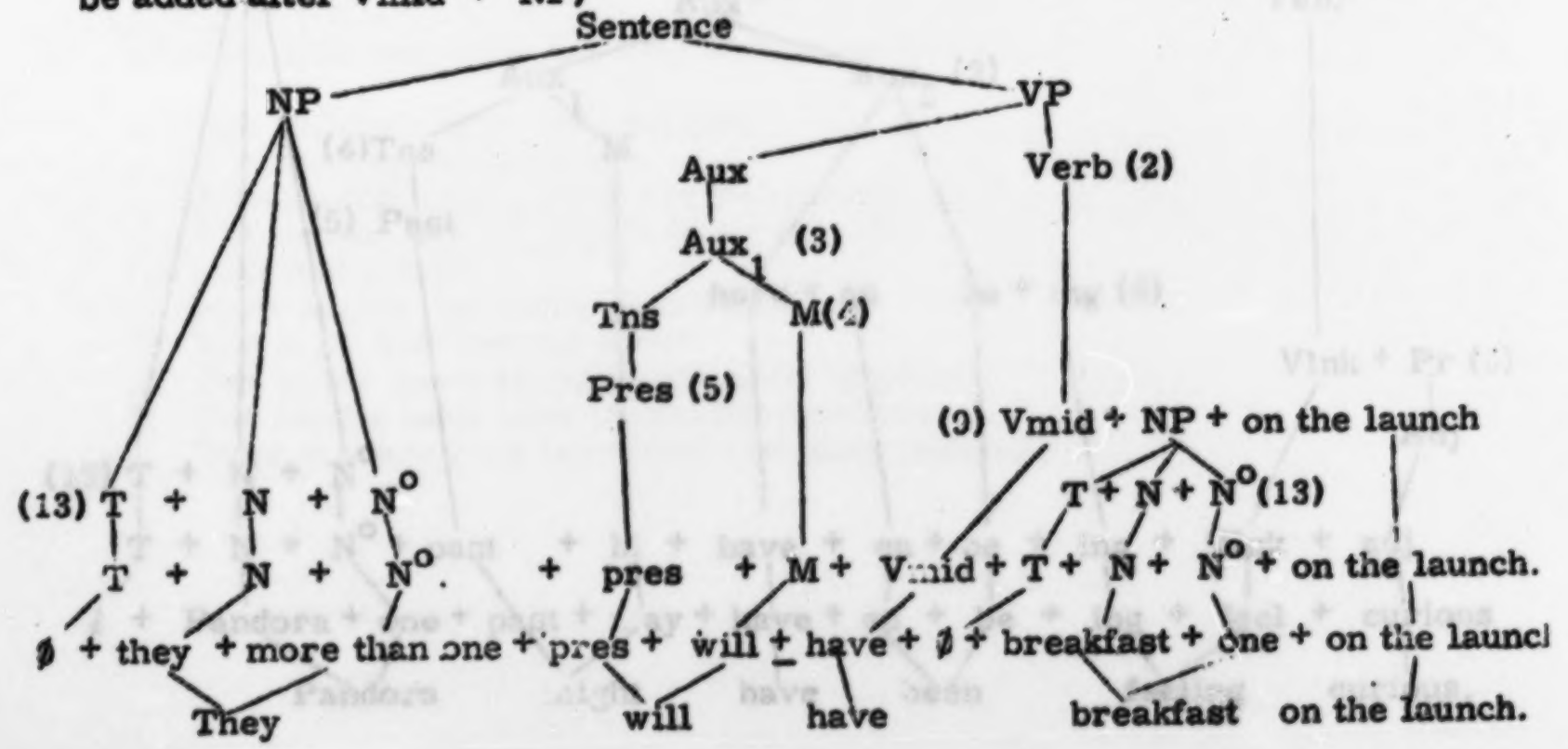


5. Omit this sentence because it is a transform.

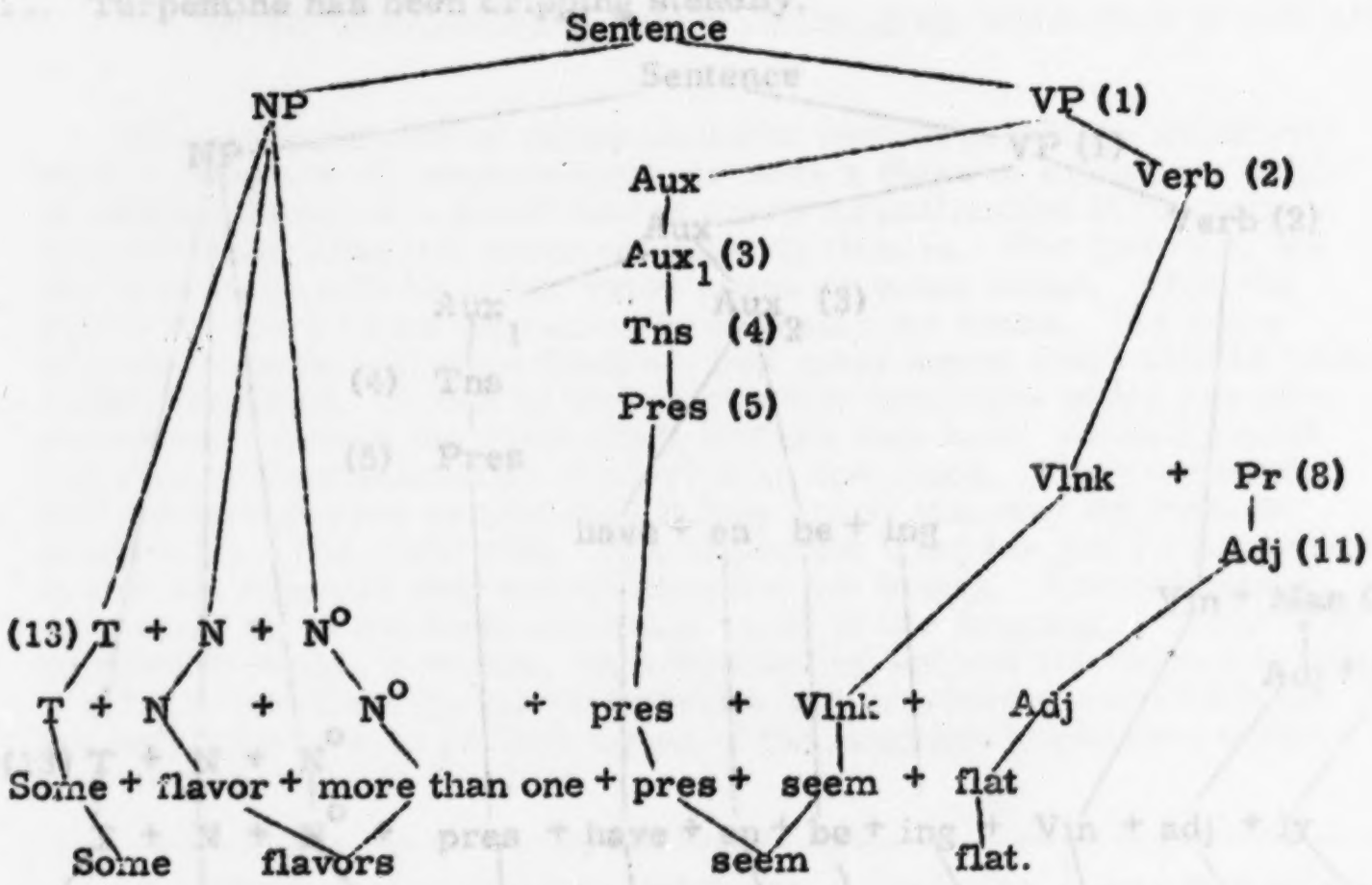
6. The toaster has been throwing the toast violently.


Sentence
NP
VP (1)
Aux
Verb (2)
Aux1
Aux2 (3)
Tns (4)
Pres (5)
have + en be + ing (3)
Vtr + NP + Man (10)
Adj + ly (11
(13) T + N + N°
T + N + N°
T + N + N° + pres + have + en + be + ing + Vtr + T + N + N° + Adj +
The + toaster + one + pres + have + en + be + ing + throw + the + toast + one + violen
+
The
toaster
has
been
throwing
the
toast violently.

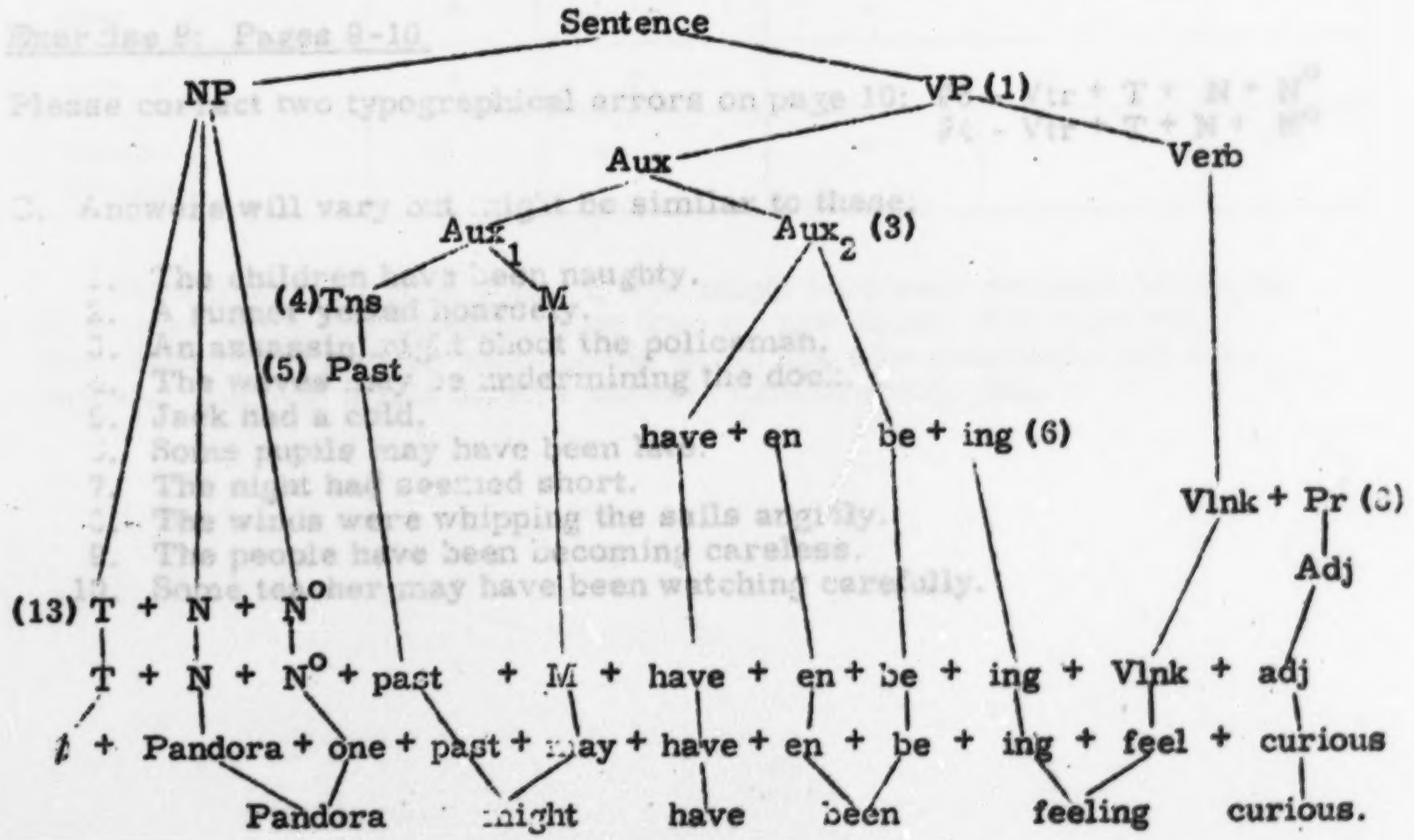
7. They will have breakfast on the launch. (This sentence contains a locative element which students have not yet studied. For now it can simply be added after Vmid + NP)


Sentence
NP
VP
Aux
Verb (2)
Aux1 (3)
Tns
M(4)
Pres (5)
(3) Vmid + NP + on the launch
(13) T + N + N°
T + N + N° (13)
T + N + N°
T + N + N° + pres + M + Vmid + T + N + N° + on the launch.
∅ + they + more than one + pres + will + have + ∅ + breakfast + one + on the launch
They
will
have
breakfast
on the launch.

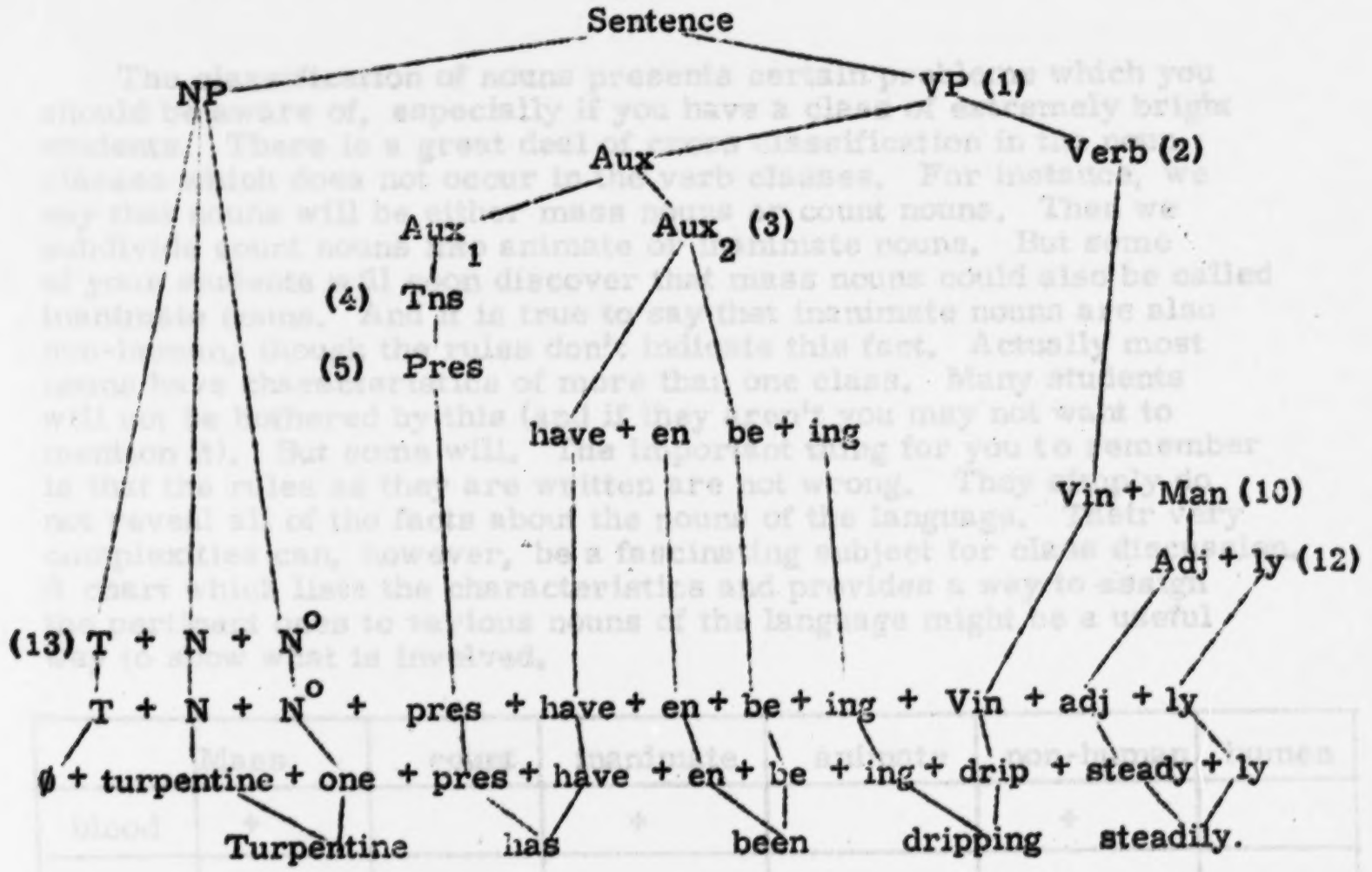
8. Some flavors seem flat.



9. Pandora might have been feeling curious.



10. Turpentine has been dripping steadily.


Sentence
NP
VP (1)
Aux
Verb (2)
Aux 1
Aux 2 (3)
(4) Tns
(5) Pres
have + en
be + ing
Vin + Man (10)
Adj + ly (12)
(13) T + N + N°
T + N + N° + pres + have + en + be + ing + Vin + adj + ly
∅ + turpentine + one + pres + have + en + be + ing + drip + steady + ly
Turpentine has been dripping steadily.

Exercise 9: Pages 9-10

Please correct two typographical errors on page 10: #3 - Vtr + T + N + N°
#4 - Vtr + T + N + N°

C. Answers will vary but might be similar to these:

1. The children have been naughty.
2. A runner yelled hoarsely.
3. An assassin might shoot the policeman.
4. The waves may be undermining the dock.
5. Jack had a cold.
6. Some pupils may have been late.
7. The night had seemed short.
8. The winds were whipping the sails angrily.
9. The people have been becoming careless.
10. Some teacher may have been watching carefully.

NOTE CONCERNING SOME PROBLEMS WITH THE NOUN PHRASE

The classification of nouns presents certain problems which you should be aware of, especially if you have a class of extremely bright students. There is a great deal of cross classification in the noun classes which does not occur in the verb classes. For instance, we say that nouns will be either mass nouns or count nouns. Then we subdivide count nouns into animate or inanimate nouns. But some of your students will soon discover that mass nouns could also be called inanimate nouns. And it is true to say that inanimate nouns are also non-human, though the rules don't indicate this fact. Actually most nouns have characteristics of more than one class. Many students will not be bothered by this (and if they aren't you may not want to mention it). But some will. The important thing for you to remember is that the rules as they are written are not wrong. They simply do not reveal all of the facts about the nouns of the language. Their very complexities can, however, be a fascinating subject for class discussion. A chart which lists the characteristics and provides a way to assign the pertinent ones to various nouns of the language might be a useful way to show what is involved.

	Mass	count	inanimate	animate	non-human	human
blood	+		+		+	
dog		+		+	+	
car		+	+		+	
steno-grapher		+		+		+

By working out such a chart, you might lead your students to arrive at a more revealing classification than we now have. For instance, one class might include mass nouns which are also inanimate and non-human. Another would include animate human nouns, etc.

RULE (14): COUNTABLE AND MASS NOUNS

(14) $N \rightarrow \left\{ \begin{matrix} N_{cnt} \\ N_{m} \end{matrix} \right\}$

Page 11
If your students have difficulty classifying count and mass nouns, you might suggest that they use the additional test of trying to place the indefinite determiner a or an before a count noun. (Mass nouns do not accept a or an nor can they be made plural.) Conceivably, the same noun form might be a count noun in one sentence but a mass noun in another.

Frame #1 (Countable) "How many_____(s) are there?"	Frame #2 (Mass) "How much_____is there?"
rainbow	sky
stove	rice
fish	blood
lure	gold
coed	iron
phone	smoke
dog	leisure
prospector	
hill	
Idaho	
railing	
room	
student	
Mary	
glasses (glass)	
table	

Exercise 1: Page 11
Answers will vary. A compiled list should be added to the students' lexicon.

Exercise 2: Page 12
Some nouns labeled below might be classified differently in other contexts (for example, food. Food is a Ncnt in the context, "He liked many different foods." which of course means different kinds of food"). Truth is a noun which fits into either category, depending on context.

A. 1. Ncnt Nm (Much indicates that the noun following will be mass.)
Teenagers eat much food.

2. Nm
The milk turned sour.

3. Ncnt Nm Nm
I drink coffee without cream.

4. Ncnt
The fields were green.

5. Ncnt Ncnt (Proper nouns tend to be Ncnt.)
Claribel cried in her handkerchief.

6. Ncnt Nm
The men counted the money secretly.

7. Nm Ncnt
The ice on the pond went out.

8. Ncnt Ncnt Ncnt
Dr. Whiteman pulled a tooth for me.

9. Ncnt Ncnt
The mouse escaped through the hole. (escaped is misspelled in the Student Version)

10. Ncnt Ncnt
The cat climbed under the hood.

B. 1. Nm Nm
The rain washed away the soil.

2. Ncnt Nm
Are you telling the truth?

3. Ncnt Ncnt
She had to sit in the corner.

4. Ncnt Nm
Fill the bucket with coal.

5. Nm Ncnt
His acting in the play was good.

6. Nm Ncnt
Space is the (new) frontier.

7. Ncnt Ncnt Ncnt Nm
The writer left a space between the lines of poetry.

8. Ncnt Nm
The Scots showed great courage.

9. Ncnt Nm Nm
Father shattered the silence with his snoring.

10. Ncnt Ncnt Nm Nm
Krakatoa blew a cubic mile of earth into the air.
#(Krakatoa is the name of an island.)

RULE (15): ANIMATE AND INANIMATE NOUNS

(15) $\text{Ncnt} \rightarrow \begin{Bmatrix} N_{an} \\ N_{in} \end{Bmatrix}$

Page 13
A speaker of English would not use Sentences 1, 2, 3, 4, 5, and 9 except in a poetic way. (Students might enjoy finding and discussing poetic exceptions.)

Acceptable (animate)	Unacceptable (inanimate)
baby	book
man	table
George Washington	chair
bear	road
	star
	bridge

Exercise 1: Page 13
Students' answers will vary. Again compiled lists of Nan and Nin should be added to their lexicons.

Page 14 (The first word in the parentheses in the paragraph in the middle of page 14 should be sleep). The nouns used as objects in the acceptable sentences (1, 4, 5, and 7) and all animate. Another test for animate nouns is that Nan would fit the frame NP + terrify + _____. Exercise 2 on page 14 reenforces this notion. #

Exercise 3: Page 14

animate nouns	inanimate nouns
boy	game
horse	rocket
butterfly	desk
policeman	bell
teacher	sky
otter	cactus
seal	car
electrician	fence
child	tree
George	
beatnik	
elephant	

RULE (16): HUMAN AND NONHUMAN NOUNS

(16) $\text{Nan} \longrightarrow \left\{ \begin{matrix} N_{hum} \\ N_{non} \end{matrix} \right\}$

It would be significant here to point out that poetry achieves a good deal of its linguistic effect by violating rules that in the normal spoken language account for the distribution of the various noun types. Personification after all is nothing more than putting a non-human noun into a context normally occupied by a human noun. Students could find examples from their literature assignments to support this.

#In the revised Student Version we have added a new test--whether or not the word always requires an it substitution. This is a more formal test and probably for that reason, more valid. The nouns in the sentences at the beginning of the section for which only an it substitution is possible are book, table, chair, road, star and bridge. The students should discover that these are also the ones he found were inanimate by the test with the verb sleep. Thus the formal distinction enforces the semantic distinction.

Exercise 1: Page 15

While all subjects in this exercise are Nan, Sentences 1, 2, 5, 8, and 13 require a what substitution.

	question word
1. horse (Nan)	What
2. butterfly (Nan)	What
3. she (Nan)	Who
4. policeman (Nan)	Who
5. otter (Nan)	What
6. They (Nan)	Who
7. beatnik (Nan)	Who
8. seal (Nan)	What
9. He (Nan)	Who
10. electrician (Nan)	Who
11. child (Nan)	Who
12. student (Nan)	Who
13. elephant (Nan)	What
14. We (Nan)	Who
15. George (Nan)	Who

Exercise 2: Page 15

replaced by who	replaced by what
she	horse
policeman	butterfly
They	otter
beatnik	seal
He	elephant
electrician	
child	
student	
We	
George	

Page 16

Nhum may be replaced by who, Nnon are replaced by what. (One interesting exception occurs when people speak of their own pets. Our own pets generally seem to become who.)

Exercise 3: Page 16

Mexican (Nhum) who	mouse (Nnon) what
choirboy (Nhum) who	she (Nhum) who#
cobbler (Nhum) who	hamster (Nnon) what
custodian (Nhum) who	gentleman (Nhum) who
Peter (Nhum) who	Spaniel (Nnon) what#
wolf (Nnon) what	it (Nnon) what
banker (Nhum) who	
lizard (Nnon) what	

#(Possible exceptions, depending on context. We sometimes use "she" with "ship" as its antecedent.)

Exercise 4: Page 13

inanimate nouns	animate nouns
ride	hitchhiker (Nhum)
egg	weasel (Nnon)
house	friends (Nhum)
firecracker	children (Nhum)
door	He (Nhum)
fire	Koala (Nnon)
house	sophomore (Nhum)
tree	president (Nhum)
picnic	snake (Nnon)
fun	
path	

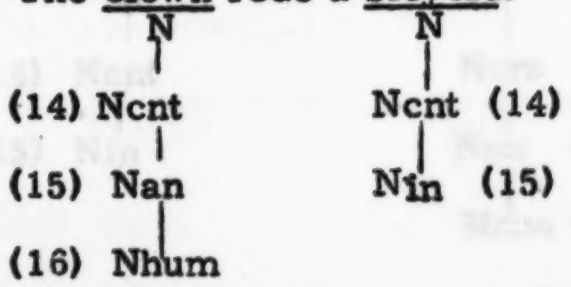
Review: Page 17

Mass nouns answer the question "how much," count nouns answer "how many." The determiners a and an do not occur with Nm.
Animate nouns can be used as the subjects of verbs like sleep or the objects of verbs like terrify and astonish. But inanimate nouns can be replaced only by it, never Human nouns may be replaced by who, nonhuman by what, by he or she.

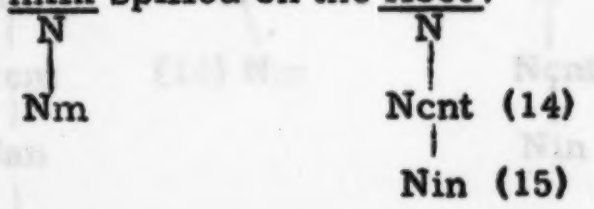
Exercise 5: Pages 17-18

This assignment furnishes practice in applying the rules of analysis to NP and should show students the orderly sequence established in a definitive study of nouns. They should come to recognize which NP rules are obligatory for all nouns and which are obligatory for some nouns. (That is, while all nouns are either count or mass, only Ncnt are subdivided into Nan or Nin. And in turn, only Nan may then be divided into human and nonhuman nouns.)

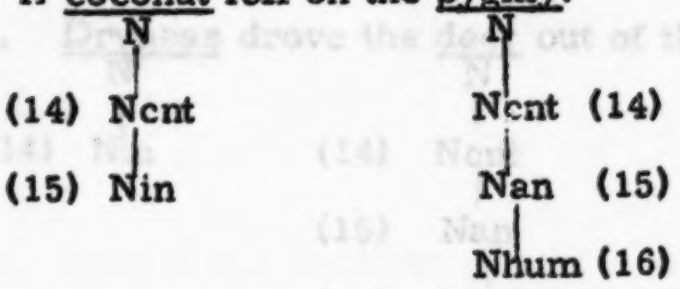
A. 1. The clown rode a bicycle.



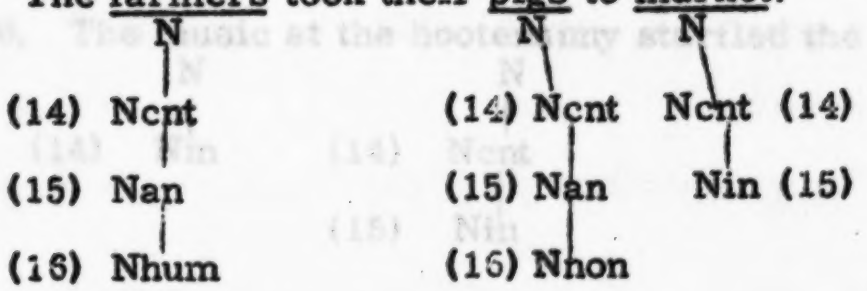
2. The milk spilled on the floor.



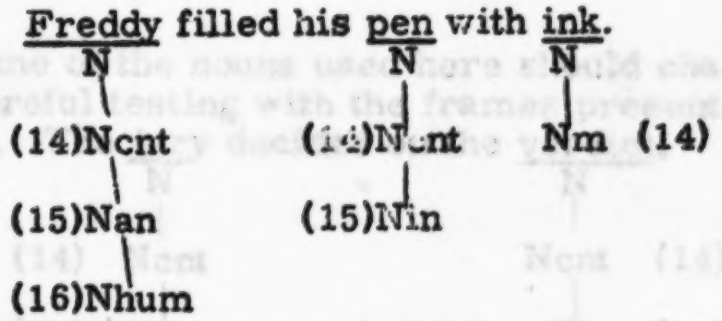
3. A coconut fell on the pygmy.



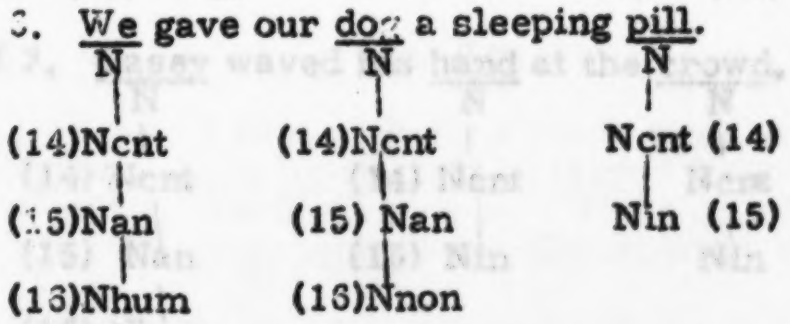
4. The farmers took their pigs to market.



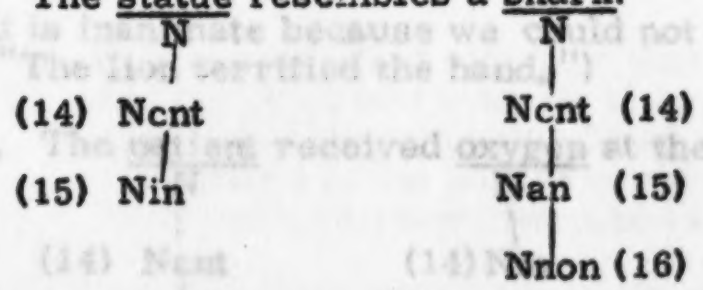
5. Freddy filled his pen with ink.



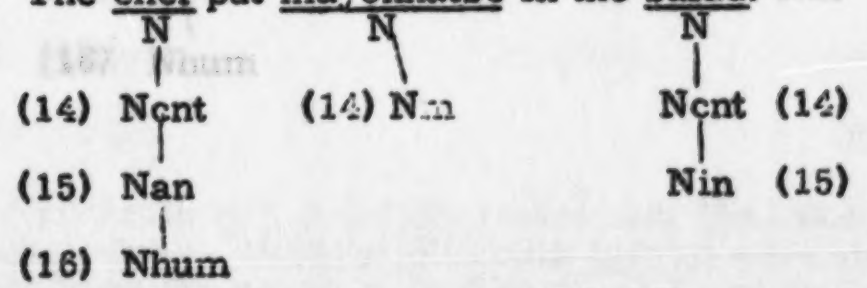
6. We gave our dog a sleeping pill.



7. The statue resembles a shark.



8. The chef put mayonnaise in the salad.



#(Salad may also be classified as Nm: "How much salad" or "How many salads." Students might like to explore both possibilities.)

9. Dryness drove the deer out of the hills.

N	N	N
(14) Nm	(14) Ncnt	Ncnt (14)
	(15) Nan	Nin (15)
	(16) Nnon	

10. The music at the hootenanny startled the horses.

N	N	N
(14) Nm	(14) Ncnt	Ncnt (14)
	(15) Nin	Nan (15)
		Nnon (16)

B. Some of the nouns used here should challenge even your best students. Careful testing with the frames presented in the rules should be helpful.

1. The jury decided on the verdict.

N	N
(14) Ncnt	Ncnt (14)
(15) Nin	Nin (15)

(Collective nouns present an interesting problem. We have a feeling that they should be human, but this is a purely semantic consideration because we can also have ". . . a crowd of . . . daffodils." Both jury and crowd fit the requirement of inanimate nouns--ability to be replaced only by it. This is a good time to emphasize the difference between semantic and formal distinctions.)

2. Casey waved his hand at the crowd.

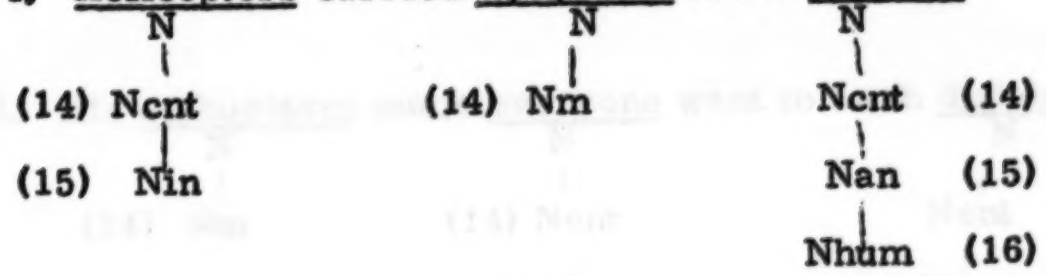
N	N	N
(14) Ncnt	(14) Ncnt	Ncnt (14)
(15) Nan	(15) Nin	Nin (15)
(16) Nhum		

#(Hand is inanimate because we could not say, "The lion terrified the hand.")

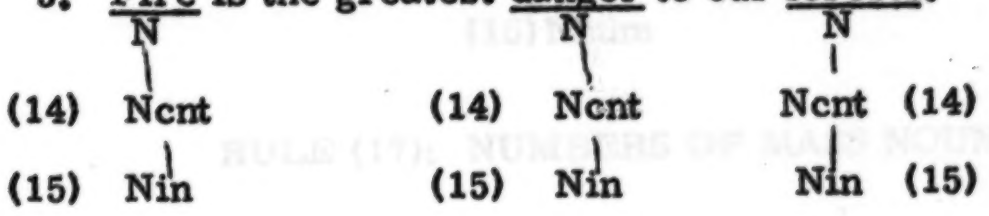
3. The patient received oxygen at the hospital.

N	N	N
(14) Ncnt	(14) Nm	Ncnt (14)
(15) Nan		Nin (15)
(16) Nhum		

4. Helicopters carried equipment to the seamen.

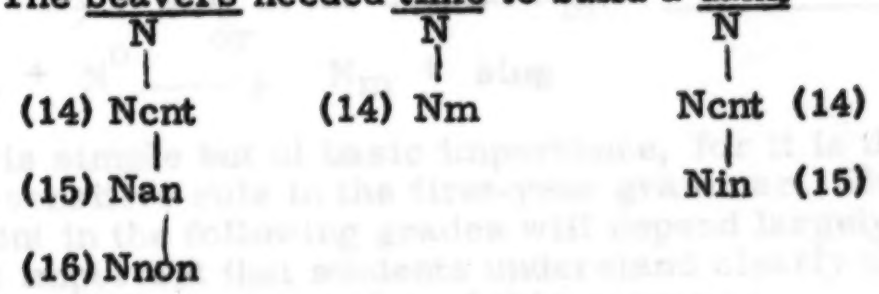


5. Fire is the greatest danger to our forests.

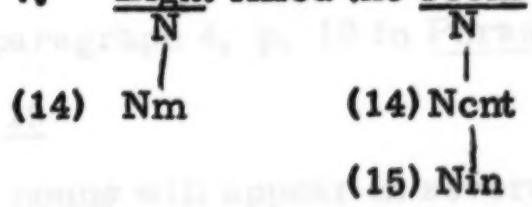


(In some senses, fire and danger might be considered mass nouns. However they both occur in the plural which indicates their countable nature.)

6. The beavers needed time to build a dam.



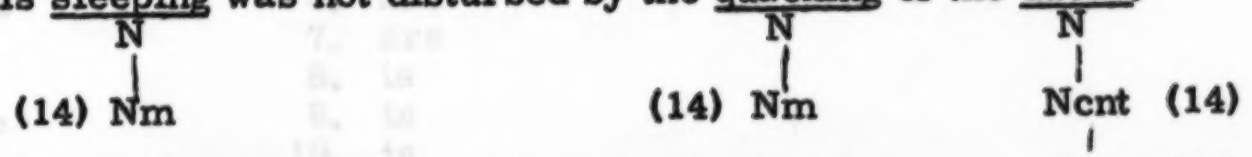
7. Light filled the room from above.



(Above is not a noun but part of an adverbial phrase with the object deleted.)

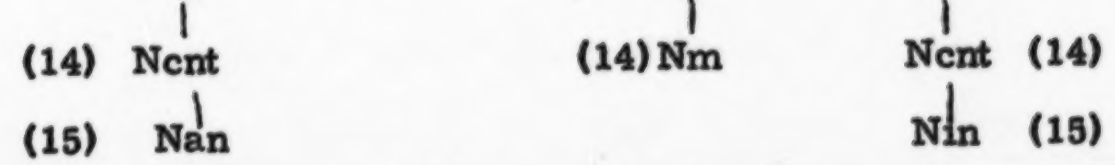
#(Light seems to qualify as a mass noun in this sentence because it fits the frame "How much light is there?" To fit "How many_____are there?" the sentence would need to be "The lights filled the room.")

8. His sleeping was not disturbed by the quacking of the ducks.



(You may wish to skip this sentence. Sleeping and quacking are actually transforms from He sleeps and Ducks quack. They shouldn't be considered in the phrase structure rules. They can't be classified like regular nouns.)

9. Mice had been eating the grain in the cellar.



#(Your students will probably notice that the noun grain would be Ncnt in a sentence such as "Several different grains were stored in the tank." In this case we have the sense of "different kinds of grain.")

10. His enthusiasm made everyone want to wash dishes.

N	N	N
(14) Nm	(14) Ncnt	Ncnt (14)
	(15) Nan	Nin (15)
	(16) Nhum	

RULE (17): NUMBERS OF MASS NOUNS

(17) $N^{o} \longrightarrow$ sing in the context N_m + _____

$N_m + N^{o} \xrightarrow{or} N_m +$ sing

This rule is simple but of basic importance, for it is the only example of a context-sensitive rule in the first-year grammar. But since the development in the following grades will depend largely on rules of this type, it is important that students understand clearly the difference between (17) and all other rules of this grammar.

(See paragraph 4, p. 19 in Phrase Structure Rules, 13-18, Student Version.)

Page 19

Some nouns will appear in several categories. We should probably think of them as two different nouns when this happens.

Exercise 1: Page 19

1. are
2. is
3. is
4. are
5. is
6. are
7. are
8. is
9. is
10. is

Page 20

Additional information about subject-verb agreement appears in the student

usage handbook. If your students have a problem in using the standard forms of subject-verb agreement, this might be the logical time for them to explore standard usage rather carefully.

Exercise 2: Page 20

Although this exercise was designed to emphasize that while Ncnt may be either singular or plural, Nm must be singular, it also provides a review of verb classes and other NP rules. Several nouns used in B lack determiners.

A. 1. T + Nm + one + pres + M + Be + adj
The cereal will be cold.

2. T + N + one + pres + have + en + be + ing + Vin
The army has been retreating.

3. T + Nm + one + pres + be + ing + Vin + adj + ly
Ø Corn is popping cheerily.

4. T + Nm + one + past + be + ing + Vlnk + adj
The heat was becoming unbearable.

5. T + Nhum + more than one + pres + have + en + Vtr + T + Nhum + more t
The boys have challenged the girls.

B. 1. T + Nm + one + pres + have + en + be + ing + Vin + adj +
Ø Time has been passing quick

2. T + Nnon + more than one + past + be + ing + Vtr + T + Nnon + more
one
The sheep were following the dogs.

3. T + Nm + one + pres + Vmid + T + Nin + one
The radium weighs an ounce.

4. T + Nin + one + pres + have + en + be + ing + Vlnk + adj
This herd has been looking sick.

5. T + Nm + one + pres + have + en + Be + T + Nin + one
Ø Pride has been a weakness.

RULE (18): SINGULAR AND PLURAL

(18) $N^{o} \longrightarrow \begin{Bmatrix} sing \\ plur \end{Bmatrix}$

Notice the economy of statement that is achieved by placing the context-sensitive rule in a position before the context-free rule. If we were to reverse the order of the rules we would find the complications increased. We can perhaps see the difference in complication if we put what the two rules are saying into prose: The order (17)-(18) gives us a statement like 'Number becomes singular if the noun preceding it is a mass noun: otherwise number can be either singular or plural.' The order (18)-(17) gives us a statement like 'Number becomes singular or plural unless the noun preceding number is a mass noun, in which case number can only become singular.' Ideally, context-sensitive rules will precede the more general context-free rules.

Exercise 1: Page 21

At present our rules do not allow for a close analysis of most in Sentence 6. (Words like most, few, some, etc. will probably be classified as predeterminers in the subsequent exploration of determiners.) For this reason you might justifiably ask students to omit "most of" in Sentence 6.

1. plur sing
The locusts in the tree sang shrilly.

2. plur
The floors had been waxed.

3. sing plur
The box was full of tests.

4. plur plur sing
The men wouldn't put their cars in the garage.

5. sing sing sing
Cream comes to the top of milk.

6. plur sing
The robbers escaped with the money.

7. sing sing sing
The cement for the patio is in the wheelbarrow.

8. sing sing
A guest knocked at the door.

9. plur sing
People are coming for dinner.

10. sing sing sing
He will never finish the exam on time.

Exercise 2: Pages 21-22

#A. 1. triangle - triangles
2. girl - girls
3. goose - geese
4. fly - flies
5. bird - birds
6. child - children
7. cell - cells
8. verb - verbs
9. milk - (no plural form)
10. pencil - pencils

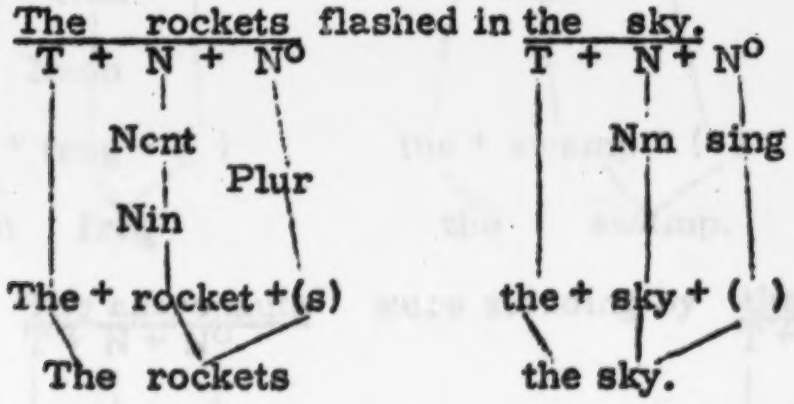
#(There is a section on forming plurals in the Usage Manual.)

B. 1. school - schools
2. valley - valleys
3. town - towns
4. editor - editors
5. woman - women
6. cooky or cookie - cookies
7. mouse - mice
8. horse - horses
9. pie - pies
10. cake - cakes

Exercise 3: Pages 22-23

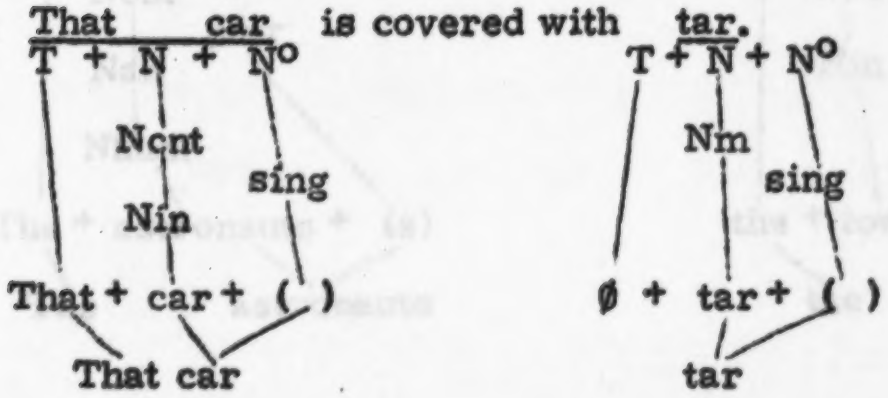
You may need to remind students that sometimes T $\longrightarrow \emptyset$. (See Sentences 3, 5, and 10 in A.)

A. 2. The rockets flashed in the sky.

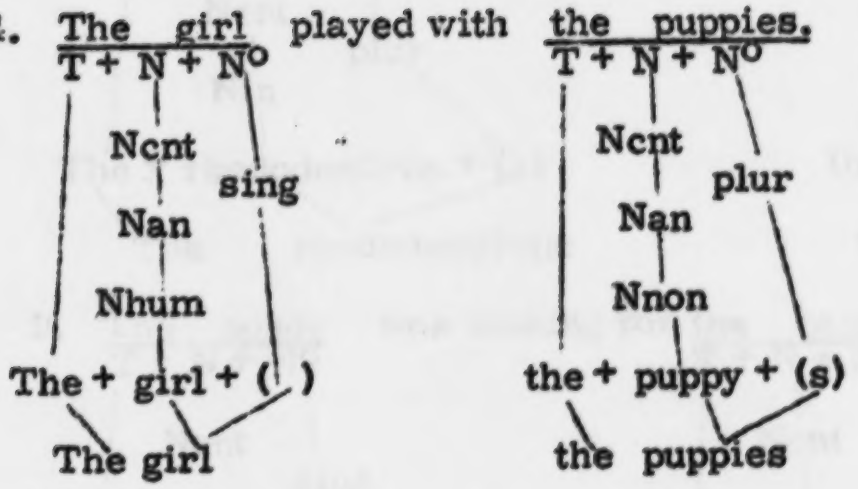


(NOTE:
It proved confusing to use (s) and ( ) as the sign of plural and singular. Ask your students to simply bring down plur or sing into the string as in the example in their text. Otherwise they should appear the way they do here.)

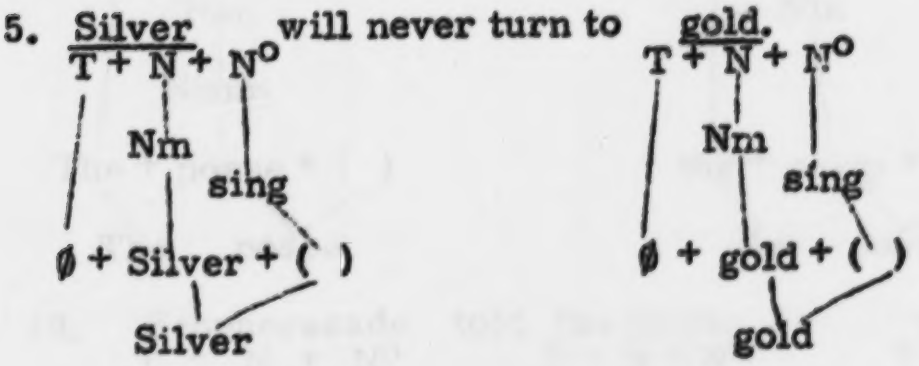
3. That car is covered with tar.



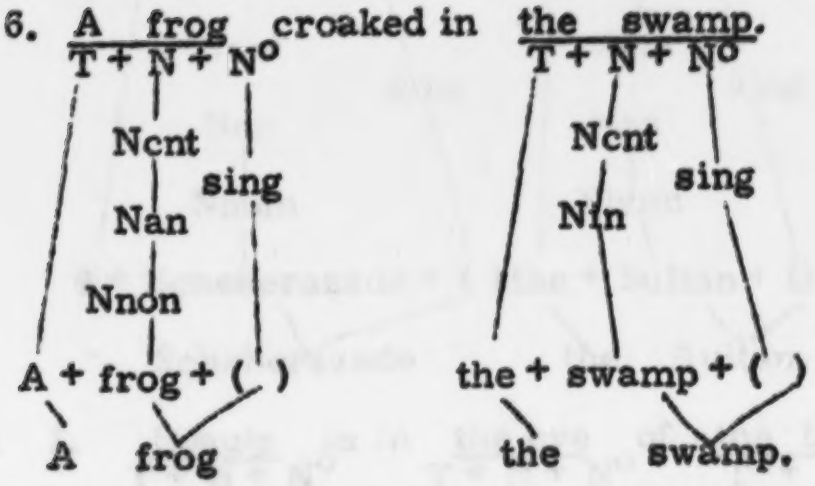
4. The girl played with the puppies.



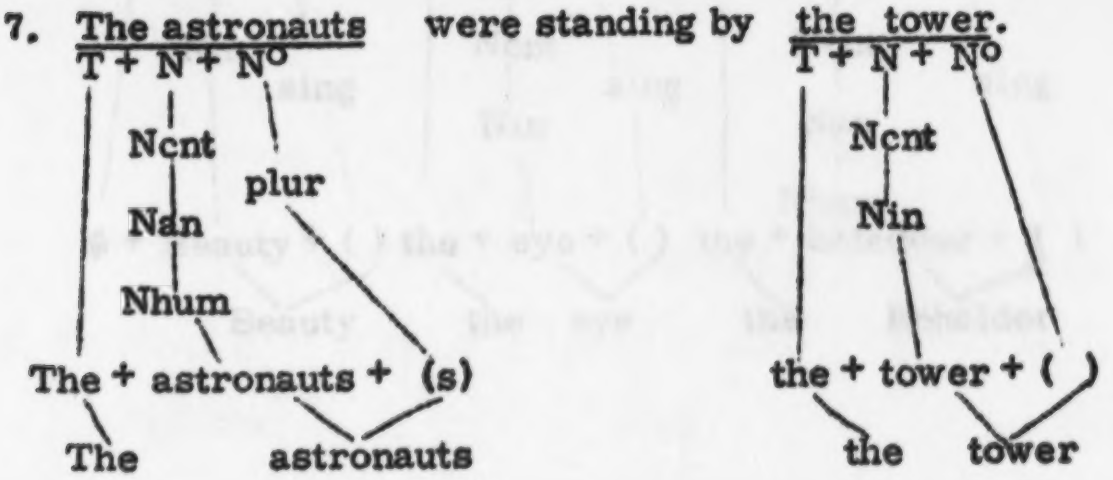
5. Silver will never turn to gold.



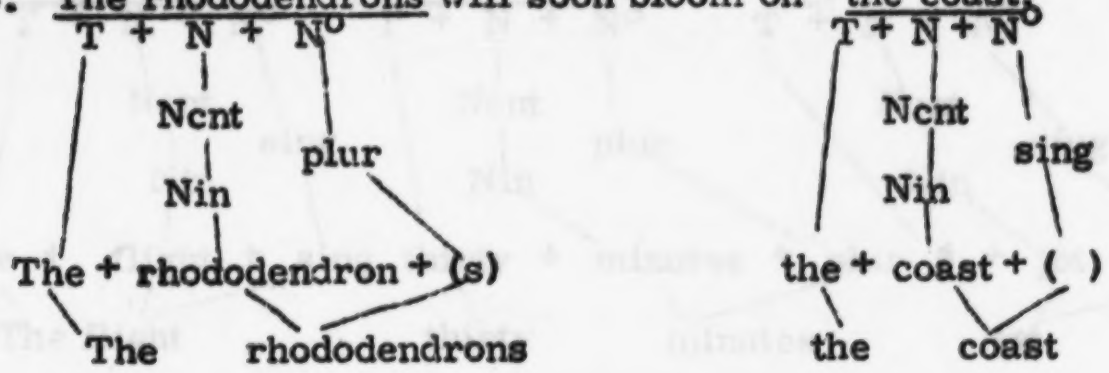
6. A frog croaked in the swamp.



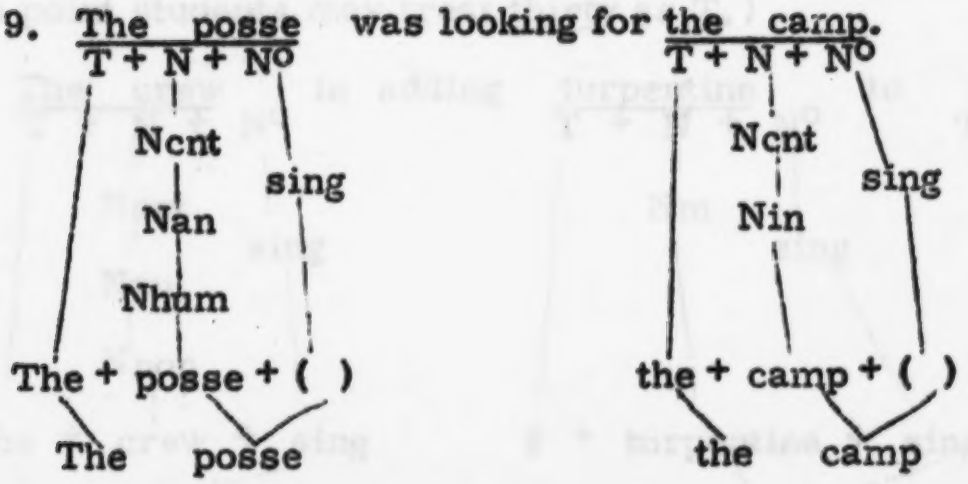
7. The astronauts were standing by the tower.



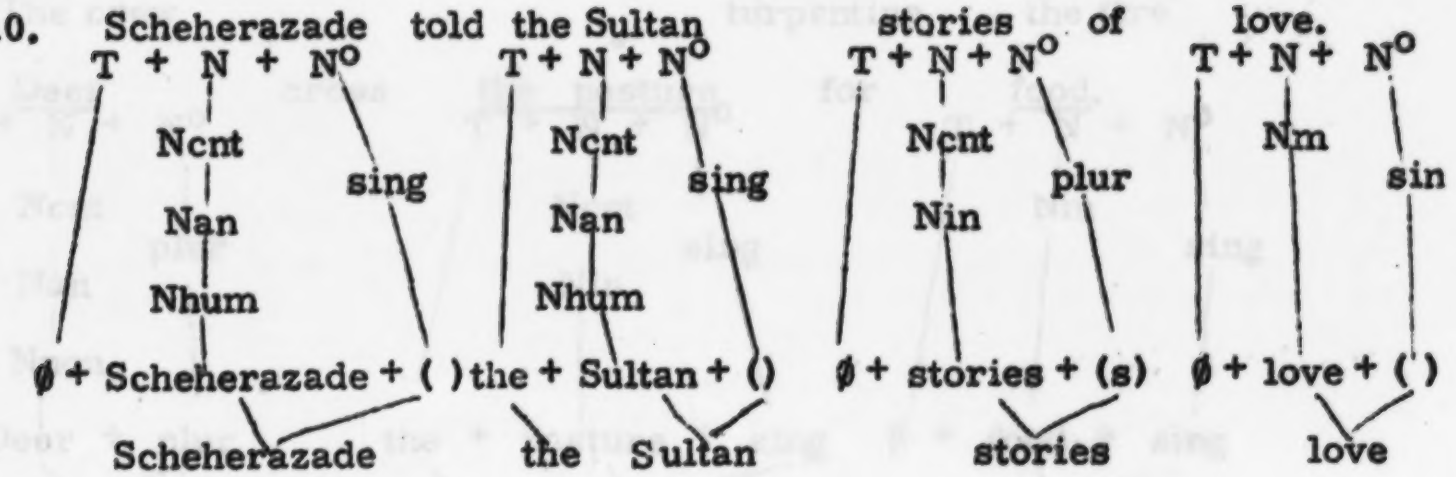
8. The rhododendrons will soon bloom on the coast.



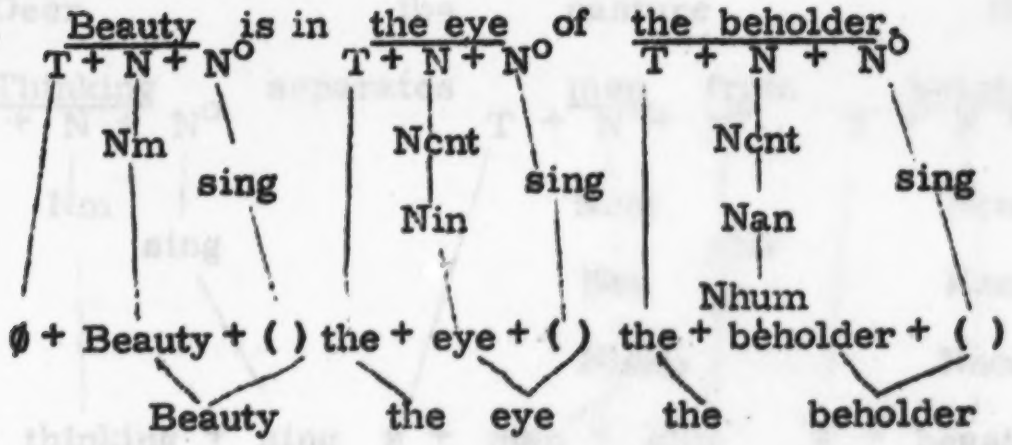
9. The posse was looking for the camp.



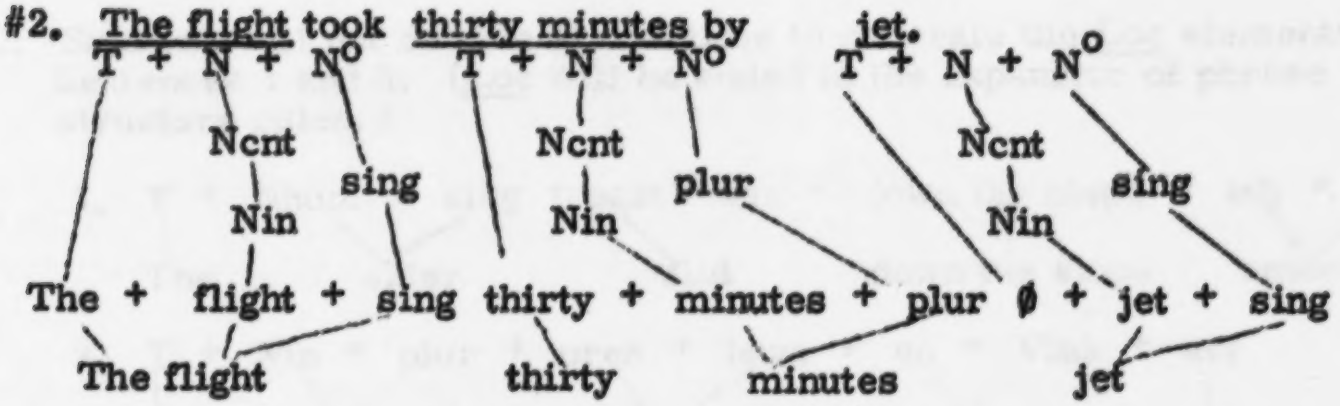
10. Scheherazade told the Sultan stories of love.



E. 1. Beauty is in the eye of the beholder.

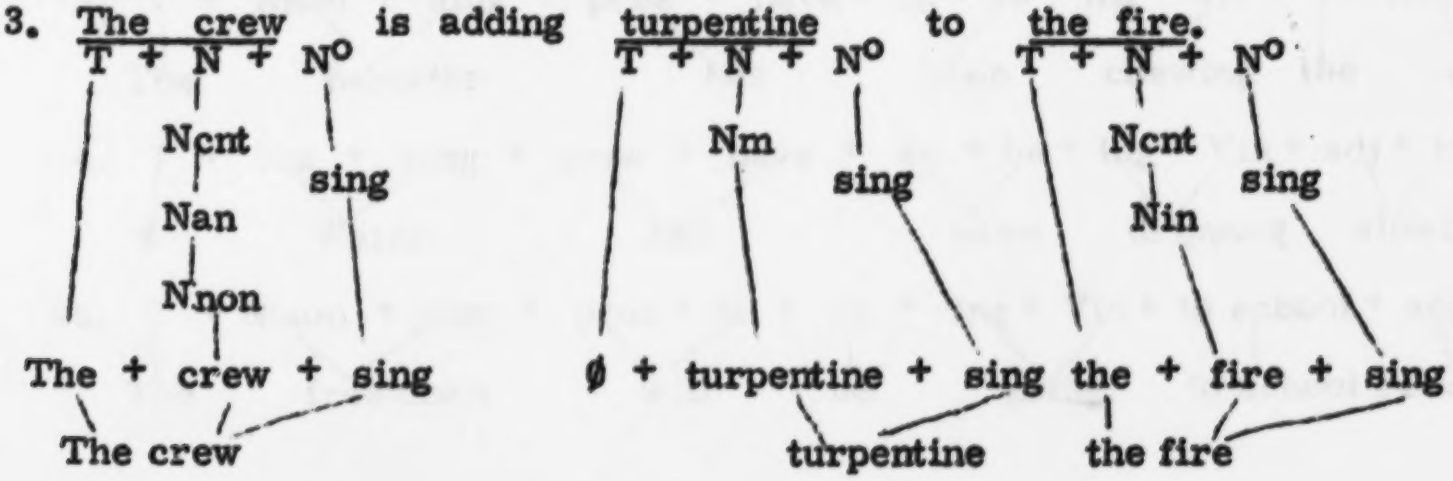


#2. The flight took thirty minutes by jet.

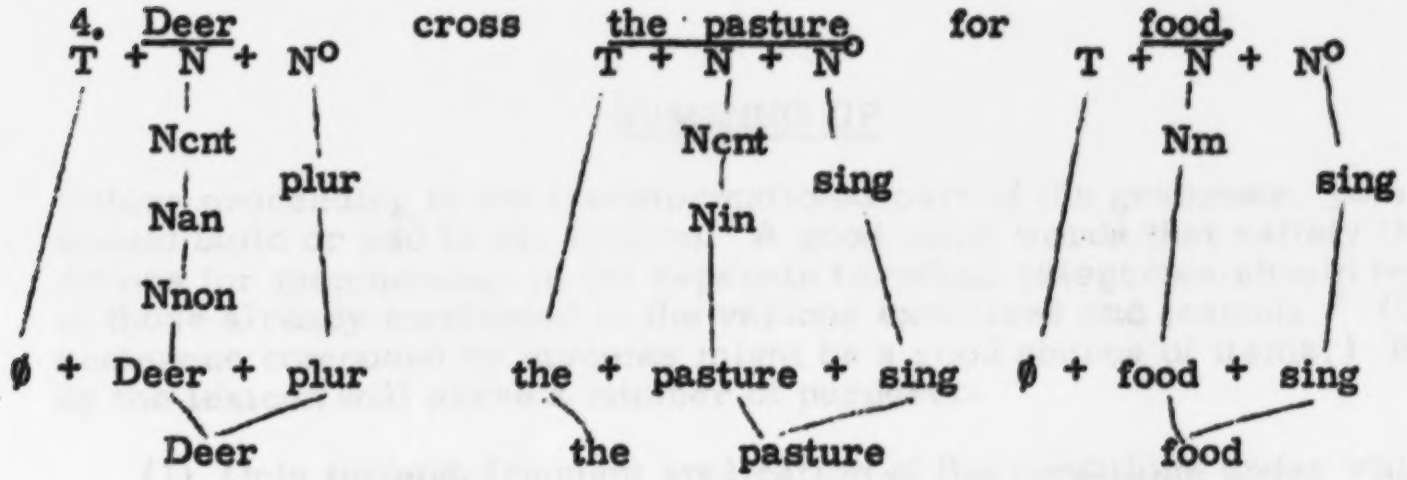


#(At his point students may treat thirty as T.)

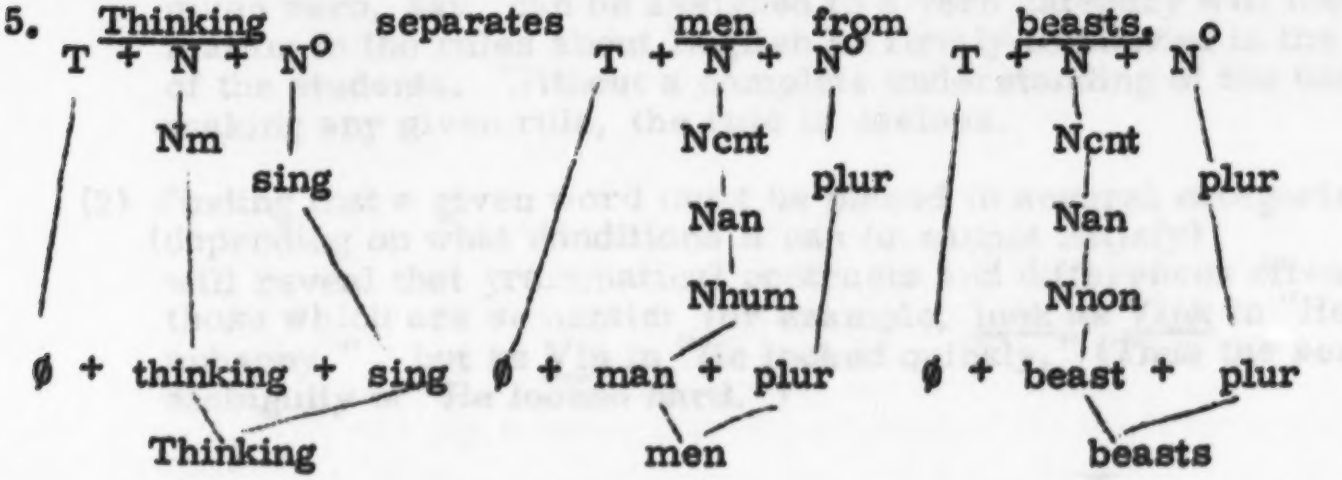
3. The crew is adding turpentine to the fire.



4. Deer cross the pasture for food.



5. Thinking separates men from beasts.



(Again, we have a gerund (thinking) which is the result of a transformation and hence should not be considered in the phrase structure. You may want to skip it.)

C. Students will not be able at this time to generate the Loc elements in Sentences 1 and 5. (Loc will be added in the expansion of phrase structure rules.)

1. T + Nhum + sing + past + Vin + down the slope + adj + ly
   The skier slid down the slope smoothly.

2. T + Nin + plur + pres + have + en + Vlnk + adj
   The redwoods have grown gigantic.

3. T + Nnon + sing + pres + have + en + be + ing + Vtr + T + Nin + s
   The hamster has been chewing the cag

4. T + Nm + sing + pres + have + en + be + ing + Vin + adj + ly
   ∅ Water has been dripping slowly.

#5. T + Nhum + plur + pres + M + be + ing + Vin + to school + adj +
   The freshmen will be going to school reluct a

SUMMING UP

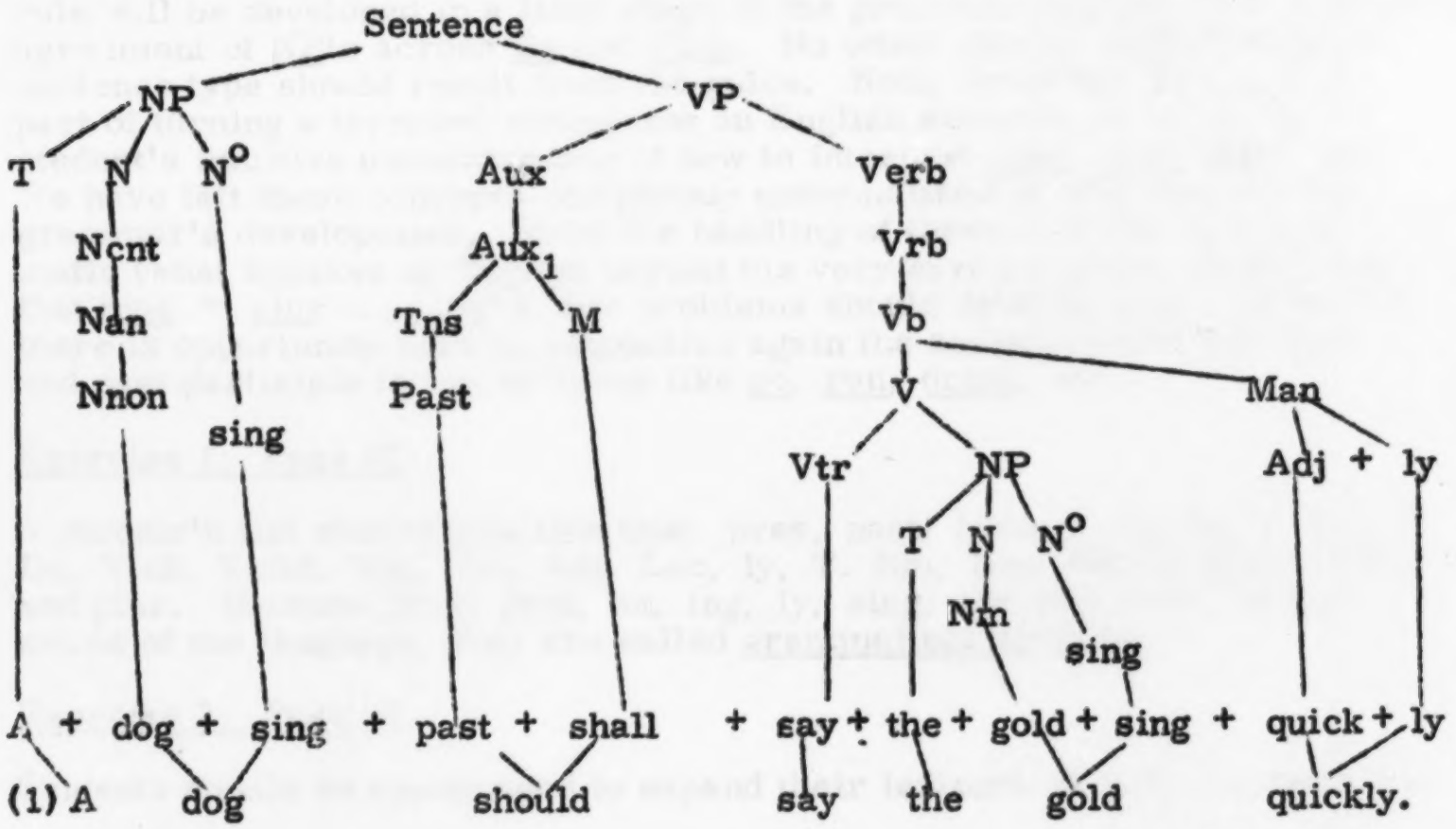
Before proceeding to the transformational part of the grammar, your class should build or add to the lexicon. A good many words that satisfy the conditions for membership in the separate terminal categories should be added to those already mentioned in the various exercises and lessons.# (Original sentences composed by students might be a good source of items.) Building up the lexicon will serve a number of purposes:

(1) Only through frequent application of the conditions under which a given verb, say, can be assigned to a verb category will the information in the rules about English be firmly implanted in the minds of the students. Without a complete understanding of the basis for making any given rule, the rule is useless.

(2) Finding that a given word must be placed in several categories (depending on what conditions it can or cannot satisfy) will reveal that grammatical contrasts and differences often underlie those which are semantic: for example, look as Vlnk in "He looked unhappy." , but as Vin in "He looked quickly." (Thus the semantic ambiguity of "He looked hard.")

(3) A lexicon of some significant size will insure more variety and interest in Exercise 3, pages 26-27.

After the lexicon has been built up, the students should proceed to the mechanical generation of sentences. In concert or individually they should run through the rules taking arbitrary choices wherever a choice is offered, skipping rules whose left members do not appear in the strings they are getting out. All terminal lexical symbols should be converted into words and the resulting sentences should be examined by the class. The adequacy and inadequacy of the sentences should give some measure of the adequacies and inadequacies of the present grammar. For instance, consider the following randomly generated sentence:



Now certainly this sentence is foolish, and nonsensical. But just as certainly, it is (in some sense of the word) grammatical: in terms of the brief grammar we have presented the students with, it is as grammatical as the quite ordinary

(2) A dog should chew a bone quietly.

We might want to say that (1) is grammatical but semantically peculiar. And this would be a precise and correct statement at this level of the grammar's development. But as we develop the grammar through the grades we shall see the world of semantics ever fleeing before us, for newer and more powerful and more precise (context-sensitive) phrase structure rules will allow the grammar to occupy a good deal of the linguistic territory normally accorded semantics.

Of course, as has been mentioned above from time to time, clearly ungrammatical sentences can result from the grammar as it now stands because

of some important restraints not having been built into it. We have already discussed nonsentences like

(3) The boy is the students.

The difficulty here is certainly of a different order from that in (1), for a primary rule of English grammar is violated in (3)--that of agreement. Probably few sentences of this kind will result from student generation: they will be intuitively corrected along the way. But if such sentences and questions about them do come up, you might say that a (transformational) rule will be developed in a later stage of the grammar to insure the necessary agreement of NP's across Be and Vlnk. No other clearly ungrammatical sentence type should result from the rules. Note, however, that a good part of turning a terminal string into an English sentence is left to the student's intuitive understanding of how to interpret past, sing, plur, etc. We have left these concepts completely unformalized at this stage in the grammar's development. Since the handling of these matters is so automatic (what speaker of English beyond his very earliest years doesn't know that man + plur $\longrightarrow$ men?), few problems should develop here. (However, there is opportunity here to emphasize again the socially preferred past and past participle forms of verbs like go, run, drink, etc.)

Exercise 1: Page 25

A student's list should look like this: pres, past, have + en, be + ing, M Be, Vlnk, Vmid, Vtr, Vin, Adj, Loc, ly, T. Nm, Nin, Nhum, Nnon, sing, and plur. Because pres, past, en, ing, ly, sing, and plur don't become words of the language, they are called grammatical symbols.

Exercise 2: Page 26

Students should be encouraged to expand their lexicons as much as possible.

Exercise 3: Page 26

Students should have fun doing this exercise which culminates their study of the eighteen basic phrase structure rules. To make this assignment most rewarding, you may want to advise them to "stay out" of the generating as much as possible. That is, encourage them to let their grammar really do the work with a minimum of manipulation on their part.